DMS-5ØØ V2
for RSTS/E V7
DMSUTL

Seq 24.2.2 R

1 of 1

DSMUTL DOES NOT HANDLE SYSTEM LOGICAL NAME (SPR 11-17682 GH)

System logical names containing account numbers in addition to device specifications are unacceptable in response to DMSUTL's "on which disk device" question.

This is a restriction in the implementation of DMSUTL. The documentation, which refers to "logical device names," is being corrected to further clarify this.

NOTE

The documentation change mentioned in the first release of this article has since been done. Please refer to the DMS - 500 USERS GUIDE update # 1 (DEC order number DEC-11-ORDUA-B-DN1) for the correction.

DMS-500 V2
for RSTS/E V7
DMSUTL

DMS-5ØØ ISAM/RAM FUNCTIONS (SPR 11-18315 GH)

DMSUTL seems to report incorrect number of records.

The number of records shown by the INSPECT option of DMSUTL occasionally is less than the actual number in the file.

The DMS-5ØØ ISAM/RAM functions only update the record count data in the File Characteristics Block when the file is CLOSE'd or when the FNH%, How Many Records, function is executed. Failure to properly close the file using the FNC% function will invalidate the record count.

DMS-500 V2
for RSTS/E V7
DMSUTL V02-03

Seq 24.2.4 M

REORGANIZING ISAM FILES CHANGES PROTECTION - MANDATORY DMSUTL PATCH (GH)

PROBLEM:

When a DMS-500 ISAM file is reorganized using the utility program DMSUTL, the protection code specified for the file is lost.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMSUTL source files are located on the public disk structure. In the patching procedure, we will, therefore, refer to those files by their simplest form: DMSUTL.BAS and DMSUTL.CHS. If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSUTL.BAS=DMSUTL.BAS
#[logfile=]
*H/DMSUTL/V<cr>
1!!!!<tab>DMSUTL<tab><tab>Version 2<tab>Edit 03<tab><tab>77/10<lf>
*G/03/-C/4/G.77/10.-4C.9/03.V<cr>
1!!!!<tab>DMSUTL<tab><tab>Version 2<tab>Edit 04<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*-C/7/G/77/-C/9/V<cr>
!!!!!<tab>Copyright (C) 1975,1977,1979,<lf>
*H/V02-03/V<cr>
<tab>PRINT "DMS-500 Utility Program<tab>V02-03" \<lf>
*-C/4/V<cr>
<tab>PRINT "DMS-500 Utility Program<tab>V02-04" \<lf>
*H/420<tab>/V<cr>
420<tab>F2%=1% \<lf>
```

```
*2AI<cr>
425<tab>X%=INSTR(1%,F2$,"<") \<lf>
<tab>IF X% THEN P%=VAL(MID(F2$,X%+1%,LEN(F2$)-X%-1%)) ELSE<lf>
<tab><tab>P%=SWAP%(CVT$%(Q9$(14%))) \<lf>
<tab><tab>F2$=F2$+"<"+NUM1$(P%)+">"<cr>
<esc>*V<cr>
430<tab>F1%=FNF% \ X%=INSTR(1%,F2$,".") \<lf>
*H/3010<tab>/V<cr>
3010<tab>LSET Q1$=Q2$ \ GET #F2%, RECORD 1% UNLESS F2$="KB:" \<lf>
*G/\ /KDV<cr>
3010<tab>LSET Q1$=Q2$ \ Q%=F1% \ GOSUB 21900 \<lf>
*AI<cr>
<tab>LSET Q9$(14%)=CVT%$(SWAP%(P%)) \<lf>
<esc>*V<cr>
<tab>LSET Q9$(25%)=Q9$(0%) \<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile this program and re-enter it in the system library, type the following RSTS/E commands.

```
OLD $DMSFSS

Ready

APPEND $DMSISO

Ready

APPEND $DMSRAO

Ready

REPLACE DMS500

Ready

OLD DMSUTL.BAS

Ready

APPEND DMS500

Ready

COMPILE $DMSUTL<40>

Ready

UNSAVE DMS500

Ready
```

4. Now apply the same patch to the other part of the utility: DMSUTL.CHS. Note that if you specified a file for [logfile=], you can use that same file as a patch command file as illustrated below.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSUTL.CHS=DMSUTL.CHS
#[=logfile]
*<Same patch applied here>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

5. This part of the utility is re-compiled as follows:

```
OLD DMSUTL.CHS

Ready

APPEND $DMSRAO

Ready

COMPILE $DMSUTL.CHC<40>

Ready
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this program.

DMS-500 V2
for RSTS/E V7
DMSFSS V02

DMS-500 ACCESS TO DIBOL ISAM FILES

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSFSS.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSFSS.BAS=$DMSFSS.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSFSS.BAS

Ready

REPLACE $DMSFSS.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSISR

Seq 24.4.2 M

1 of 1

BASIC-PLUS SOURCE FILE CORRECTIONS (SPR 11-12655 GH)

1. Blocks Get Locked While Adding to an ISAM File

Under certain circumstances, adding a record to a DMS-500 ISAM file can cause a block of the file to become locked until the program doing the add does something else with that same file.

2. Incorrect Status When Record Not Found at End of File

Attempting to retrieve a record randomly that is not in the file, but if it were would be at the end of the file, returns status code 88 rather than 11 as is correctly stated in the DMS-500 User's Guide.

Apply the following coorections to the two BASIC-PLUS source files:

DMSISR.BAS and DMSISA.BAS

using the following procedures:
(Note that these corrections are included in the RSTS/E Patch Kits A and later.)

```
RUN $EDIT<cr>
<EDIT's header line>

#<file name>=<file name>/PATCH<cr>

*H/03/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>77/09<lf>
*-C/4/5J2C/10/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>77/10<lf>
*2AL<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*H/21270<tab>/V<cr>
21270<tab>IF Q0%=13% THEN RETURN ELSE Q%(Q%,6%)=( Q%(Q%,1%)=7% ) \<lf>
*I/Q%(Q%,6%)=( Q0%<>6% ) \ /G/ELSE/29DV<cr>
21270<tab>Q%(Q%,6%)=( Q0%<>6% ) \ IF Q0%=13% THEN RETURN ELSE<lf>
*2AL<cr>
<tab>GOTO 21999 ELSE Q%(Q%,2%)=-1% \ Q%(Q%,6%)=0% \<lf>
*G/ELSE/1/ GOSUB 21465 \/G/\/15DV<cr>
<tab>GOTO 21999 ELSE GOSUB 21465 \ Q%(Q%,2%)=-1% \<lf>
*AL<cr>
<tab>IF Q9% GOTO 21999 ELSE 21987<lf>
*G/21/3C/987/G/21/3C/999/V<cr>
<tab>IF Q9% GOTO 21987 ELSE 21999<lf>
*EX<cr>
#^Z

Ready
```

DMS-500 V2
for RSTS/E V7
DMSISR V02

Seq 24.4.3 F

1 of 2

DMS-500 ACCESS TO DIBOL ISAM FILES

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISR.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISR.BAS=$DMSISR.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISR.BAS

Ready

REPLACE $DMSISR.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSISC V02-02

Seq 24.5.1 M

CORE RESIDENT INDEX LOCKS FILE - MANDATORY DMSISC PATCH (GH)

PROBLEM:

If you use the Core Resident Index module DMSISC and you open a DMS-500 ISAM file for Update, Random, that file will be locked against any other program accessing it randomly.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISC.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISC.BAS=$DMSISC.BAS
#[logfile=]
*H/EDIT 02/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 02<tab><tab>76/03/29<lf>
*-C/3/3J7C.9/03.V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,<lf>
*I/,1979/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1979,<lf>
*H/21215<tab>/V<cr>
21215<tab>IF Q%(Q%,12%) THEN<lf>
```

DMS-500 V2
for RSTS/E V7
DMSISC V02-02

Seq 24.5.1 M

2 of 2

```
*AV<cr>
<tab>GET #Q%, RECORD Q%(Q%,13%) \ FIELD #Q%, 512% AS Q9$ \<lf>
*G//I<cr>
<lf>
<tab>UNLOCK #Q% \<esc>*V<cr>
<tab>UNLOCK #Q% \ FIELD #Q%, 512% AS Q9$ \<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISC.BAS

Ready

REPLACE $DMSISC.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSRAR V02

DMS-500 ACCESS TO DIBOL ISAM FILES

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSRAR.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSRAR.BAS=$DMSRAR.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSRAR.BAS

Ready

REPLACE $DMSRAR.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSISA

Seq 24.7.2 M

1 of 1

BASIC-PLUS SOURCE FILE CORRECTIONS (SPR 11-12655 GH)

1. Blocks Get Locked While Adding to an ISAM File

Under certain circumstances, adding a record to a DMS-500 ISAM file can cause a block of the file to become locked until the program doing the add does something else with that same file.

2. Incorrect Status When Record Not Found at End of File

Attempting to retrieve a record randomly that is not in the file, but if it were would be at the end of the file, returns status code 88 rather than 11 as is correctly stated in the DMS-500 User's Guide.

Apply the following coorections to the two BASIC-PLUS source files:

DMSISR.BAS and DMSISA.BAS

using the following procedures:
(Note that these corrections are included in the RSTS/E Patch Kits A and later.)

```
RUN $EDIT<cr>
<EDIT's header line>

#<file name>=<file name>/PATCH<cr>

*H/03/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>77/09<lf>
*-C/4/5J2C/10/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>77/10<lf>
*2AL<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*H/21270<tab>/V<cr>
21270<tab>IF Q0%=13% THEN RETURN ELSE Q%(Q%,6%)=( Q%(Q%,1%)=7% ) \<lf>
*I/Q%(Q%,6%)=( Q0%<>6% ) \ /G/ELSE/29DV<cr>
21270<tab>Q%(Q%,6%)=( Q0%<>6% ) \ IF Q0%=13% THEN RETURN ELSE<lf>
*2AL<cr>
<tab>GOTO 21999 ELSE Q%(Q%,2%)=-1% \ Q%(Q%,6%)=0% \<lf>
*G/ELSE/I/ GOSUB 21465 \/G/\/15DV<cr>
<tab>GOTO 21999 ELSE GOSUB 21465 \ Q%(Q%,2%)=-1% \<lf>
*AL<cr>
<tab>IF Q9% GOTO 21999 ELSE 21987<lf>
*G/21/3C/987/G/21/3C/999/V<cr>
<tab>IF Q9% GOTO 21987 ELSE 21999<lf>
*EX<cr>
#^Z

Ready
```

DMS-500 V2
for RSTS/E V7
DMSISA V02

DMS-500 ACCESS TO DIBOL ISAM FILES **DMSISA PATCH (GH)**

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISA.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISA.BAS=$DMSISA.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISA.BAS

Ready

REPLACE $DMSISA.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSISA V02-04

INCORRECT RECORD LOCK DURING ADD - MANDATORY DMSISA PATCH (GH)

PROBLEM:

If adding a record to a DMS-500 ISAM file fails because of "Duplicate key not allowed," error 13, the block incorrectly remains locked.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISA.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISA.BAS=$DMSISA.BAS
#[logfile=]
*H/EDIT 04/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>77/10<lf>
*-C/5/3J4C.9/03.V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 05<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*-C/7/G/1977/-C/9/V<cr>
!!!!!!<tab>Copyright (C) 1975,1977,1979,<lf>
*H/21330<tab>/V<cr>
21330<tab>Q$=MID(Q5$,Q%(Q%,9%),Q%(Q%,8%)) \ GOSUB 21225 \<lf>
```

```
*2AV<cr>
<tab>IF Q%(Q%,10%)<0% GOTO 21340 ELSE IF Q%(Q%,10%)=0% GOTO 21988<cr>
*G/ELSE/C<cr>
<lf>
<tab><esc>*G/=0%/I/ THEN GOSUB 21465 \/V<cr>
<tab>IF Q%(Q%,10%)=0% THEN GOSUB 21465 \ GOTO 21988<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISA.BAS

Ready

REPLACE $DMSISA.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSRAA V02

DMS-500 ACCESS TO DIBOL ISAM FILES - DMSRAA PATCH (GH)

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSRAA.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSRAA.BAS=$DMSRAA.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSRAA.BAS

Ready

REPLACE $DMSRAA.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSISO V02-03

Seq 24.10.2 M

1 of 2

EXTEND MODE DESTROYS OVERFLOW AREA - MANDATORY DMSISO PATCH (GH)

PROBLEM:

Using "Extend Mode" with DMS-500 ISAM files (by appending DMSFSX to DMSISO) will cause the Overflow Area of the file to be destroyed.

SOLUTION:

The patch detailed below will correct the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISO.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISO.BAS=$DMSISO.BAS
#[logfile=]
*H/03/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>77/10<lf>
*-C/4/G.77/10.-4C.9/03.V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*-C/7/G/77/-C/9/V<cr>
!!!!!!<tab>Copyright (C) 1975,1977,1979,<lf>
*H/21710<tab>/V<cr>
21710<tab>IF Q%(Q%,12%)<=1% THEN GOSUB 21450 \ ON ERROR GOTO 21950 \<lf>
```

DMS-500 V2
for RSTS/E V7
DMSISO V02-03

Seq 24.10.2 M

2 of 2

```
*AL<cr>
<tab>LSET Q9$(8%)=CVT%$(SWAP%(Q%(Q%,13%))) \ LSET Q9$(11%)=CVT%$(0%) \<lf>
*G/\/26DV<cr>
<tab>LSET Q9$(8%)=CVT%$(SWAP%(Q%(Q%,13%))) \<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISO.BAS

Ready

REPLACE $DMSISO.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSISO V02-04

OUTPUT MODE DOES NOT SET RECORD COUNT CORRECTLY - MANDATORY DMSISO PATCH (GH)

PROBLEM:

If you use the Output Mode functions (DMSISO) with a DMS-500 ISAM file, the record count will not be set correctly when you are finished. (Also, there are some unnecessary lines included in the DMSISO module.)

SOLUTION:

The patch detailed below will correct the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISO.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISO.BAS=$DMSISO.BAS
#[logfile=]
*H/04/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>79/03<lf>
*-C/5/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 05<tab><tab>79/03<lf>
*H/21200<tab>/V<cr>
21200<tab>Q2%=ASCII(Q9$(16%)) \ Q4%=Q%(Q%,11%) \<lf>
*0A11KV<cr>
*H/21560<tab>/V<cr>
21560<tab>Q%(Q%,4%),Q%(Q%,5%)=ASCII(Q9$(10%))-ASCII(Q9$(13%)) \<lf>
```

DMS-500 V2
for RSTS/E V7
DMSISO V02-04

Seq 24.10.3 M

2 of 2

```
*4AI<cr>
21603<tab>Q8(Q%)=-Q9 \ Q9=0.<cr>
<esc>*V<cr>
21605<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISO.BAS

Ready

REPLACE $DMSISO.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DMSFSX V02-03

OUTPUT MODE DOES NOT SET RECORD COUNT CORRECTLY - MANDATORY DMSFSX PATCH (GH)

PROBLEM:

If you use the Output Mode functions (DMSISO) with a DMS-500 ISAM file, the record count will not be set correctly when you are finished. When the patch detailed in Article Seq. 24.10.3 is installed in DMSISO, however, the Extend Mode function implemented by appending DMSFSX will no longer set the record count properly.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSFSX.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSFSX.BAS=$DMSFSX.BAS
#[logfile=]
*H/03/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>77/01<lf>
*-C/4/G.77/01.-4C.9/03.V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*-C/7/G/77/-C/9/V<cr>
!!!!!!<tab>Copyright (C) 1975,1977,1979,<lf>
*H/21600<tab>/V<cr>
21600<tab>LSET Q0$=""  IF Q%(Q%,12%)=0% THEN Q%(Q%,3%)=Q3% ELSE<lf>
```

DMS-500 V2
for RSTS/E V7
DMSFSX V02-03


```
*3AI<cr>
21602<tab>GOTO 21605<cr>
<esc>*V<cr>
32767<tab>END<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSFSX.BAS

Ready

REPLACE $DMSFSX.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V7
DSORT

RETURN WITHOUT GOSUB IN DSORTS (FH)

DSORTS Fails with a 'RETURN WITHOUT GOSUB AT LINE 20610' when just a '/S' is typed after a key extraction on a DMS500 file structure. This is due to DSORT not properly formatting core common.

The following procedure patches the source file:

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - DSORT=DSORT<cr>
#[logfile=]<cr>
*H.EDIT 05.V<cr>
1!!!!!<tab>DSORT<tab><tab>VERSION 08<tab>EDIT 05<tab><tab>77/09<cr>
*-C.6.G.77/09.V<cr>
1!!!!!<tab>DSORT<tab><tab>VERSION 08<tab>EDIT 06<tab><tab>77/09<cr>
*-5C.78/04.2AL<cr>
!!!!!<tab>Copyright (C) 1972,73,74,75,76,77,<lf>
*G.77,.I.78,.V<cr>
!!!!!<tab>Copyright (C) 1972,73,74,75,76,77,78,<lf>
*H.V08-.V<cr>
<tab>"DSORT  V08-05<tab>";RIGHT(SYS(CHR$(6%)+CHR$(9%)+CHR$(0%)),3%)<lf>
*2C.06.<cr>
*H.11840<tab>.V<cr>
11840<tab>B$=CHR$((C1%=0%)+(C1%+1%))+MID(B$,3%,1%)+CHR$(0%)+RIGHT(B$,4%) :<lf>
*G.RIGHT.G.,.C.5.V<cr>
11840<tab>B$=CHR$((C1%=0%)+(C1%+1%))+MID(B$,3%,1%)+CHR$(0%)+RIGHT(B$,5%) :<lf>
*EX<cr>
```

Now recompile the program into your library with protection code <104>.

DMS-500 V2
for RSTS/E V7
DSORTF VØ8-Ø3

FIELD OVERFLOW ERROR USING /F (FH)

When sorting from one DMS-500 file structure into another, if the DMS-500 ISAM key does not start at the same byte or if it is shorter and duplicate keys are not allowed, then DSORTF fails with a FIELD OVERFLOWS BUFFER AT LINE 21635 error.

Altering line number 7170 of DSORTF to the following, will correct the problem.

```
7170  IF K1%=P2%(4%)AND K2%>=P2%(3%)THEN 7174 ELSE
      P2%(4%)=K1%:P2%(3%)=K2%:D3%=-1%:
      P2%(9%)=5Ø8%/(K2%+3%)
      !IF SORT KEY POSITION <> FCB OR LENGTH<FCB THEN CHANGE THEM
      AND MAKE SURE WE CAN HAVE DUPLICATE KEYS
```

The alterations are underlined. Update the headers to read EDIT Ø4.

DMS-500 V2
for RSTS/E V7
DSORTX V08-02

CORE COMMON CORRECTION - MANDATORY DSORTX PATCH (FH)

PROBLEM:

DSORTS cannot find DSORTM because core common gets rearranged incorrectly.

SOLUTION:

The patch detailed below will correct the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DSORTX source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: DSORTX.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DSORTX.BAS=DSORTX.BAS
#[logfile=]
*H.EDIT 02.V<cr>
1!!!!!<tab>DSORTX<tab><tab>VERSION 08<tab>EDIT 02<tab><tab>77/01<cr>
*-C.3.G.77/01.-5C.79/02.V<cr>
1!!!!!<tab>DSORTX<tab><tab>VERSION 08<tab>EDIT 03<tab><tab>79/02<cr>
*H.1972,.V<cr>
!!!!!<tab>Copyright (C) 1972,73,74,75,76,77,<lf>
*12D3JI.79,.V<cr>
!!!!!<tab>Copyright (C) 1972,77,79,<lf>
*H.V08-02.V<cr>
150<tab>PRINT " DSORTX V08-02"; IF T7%<lf>
*-C.3.V<cr>
150<tab>PRINT " DSORTX V08-03"; IF T7%<lf>
*H.30010<tab>H.V<cr>
30010<tab>H%=H%+100% IF T7% :<lf>
```

DMS-500 V2
for RSTS/E V7
DSORTX V08-02

Seq 24.22.2 M

2 of 2

```
*2AL<cr>
<tab>V1$=V1$+CHR$(C1%)+CHR$(Z9%)+CHR$(H%)+A8$+STRING$(3%,0%) :<1f>
*G.+CHR$(H%)+.I.CHR$(0%)+.G.STRING$(3.-C.2.V<cr>
<tab>V1$=V1$+CHR$(C1%)+CHR$(Z9%)+CHR$(H%)+CHR$(0%)+A8$+STRING$(2%,0%) :<1f>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile this program and re-enter it in the system library, type the following RSTS/E commands.

```
OLD DSORTX.BAS

Ready

COMPILE $DSORTX<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this program.

DMS-500 V2
for RSTS/E V7
DSORTX V08-03

BAD DATA FILE HEADER - MANDATORY DSORTX PATCH (FH)

PROBLEM:

When the next version of the RSTS/E Operating System is released, one of the items of data that DSORTX uses to determine the characteristics of Type 1 files will change. To insure consistency with this and future releases of RSTS/E, it is necessary to change the way DSORTX obtains this information.

SOLUTION:

The patch detailed below will make the necessary change.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DSORTX source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: DSORTX.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DSORTX.BAS=DSORTX.BAS
#[logfile=]
*H.EDIT 03.V<cr>
1!!!!!<tab>DSORTX<tab><tab>VERSION 08<tab>EDIT 03<tab><tab>79/02<cr>
*-C.4.G.79/02.-C.3.V<cr>
1!!!!!<tab>DSORTX<tab><tab>VERSION 08<tab>EDIT 04<tab><tab>79/03<cr>
*H.V08-03.V<cr>
150<tab>PRINT " DSORTX V08-03"; IF T7%<lf>
*-C.4.V<cr>
150<tab>PRINT " DSORTX V08-04"; IF T7%<lf>
*H.31035<tab>.V<cr>
31035<tab>V2%=1%: GOSUB 29560: Q9$=SYS(CHR$(6%)+CHR$(-8%)+CHR$(P%(2%))):<lf>
*G.Q9$.G.6.-C.12.2J23DV<cr>
31035<tab>V2%=1%: GOSUB 29560: Q9$=SYS(CHR$(12%)):<lf>
```

```
*H.31050<tab>.V<cr>
31050<tab>IF P%(0%)/P%(4%)>CVT$%(MID(Q9$,8%,1%)+MID(Q9$,7%,1%))<lf>
*G.Q9$,.C.14.G.7.-C.13.V<cr>
31050<tab>IF P%(0%)/P%(4%)>CVT$%(MID(Q9$,14%,1%)+MID(Q9$,13%,1%))<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile this program and re-enter it in the system library, type the following RSTS/E commands.

```
OLD DSORTX.BAS

Ready

COMPILE $DSORTX<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this program.

DMS-5ØØ V2
for RSTS/E V7
DSORTS

Seq 24.23.1 R

1 of 1

MISORDERED OUTPUT FILE ADDENDUM (SPR 11-9940 FH)

Under certain circumstances, a misordered output file may be produced from a correct key file.

Before installing the following patch, install the patch in sequence 24.22.1.

Add line number 29Ø74 to DSORTS as follows:

```
29Ø74   N%=1Ø7% : B$=FNC4$
        ! SAVE B%
```

and modify line number 29Ø2Ø so that the assignment statement for V2$ reads as follows:

```
V2$=SYS(CHR$(8%)+V1$+STRING$(42%,Ø%)+B$)
```

Update the headers to read EDIT 02.

DMS-500 V2
for RSTS/E V7
DSORTS

DSORTS MAY FAIL ON KEY LENGTHS GREATER THAN 252 (SPR 11-15592 FH)

DSORTS May fail with 'FIELD OVERFLOWS BUFFER AT LINE 28010' if the length of the combined keys is greater than 252 for DMS500 file structures or 254 for other file types.

The following procedure corrects the problem by patching the source file for DSORTS. This patch will be included in Patch Kit C and later.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - DSORTS=DSORTS<cr>
#[logfile=]<cr>
*H.02.V<cr>
1!!!!!<tab>DSORTS<tab><tab>VERSION 08<tab>EDIT 02<tab><tab>77/01<cr>
*-C.3.G.77/01.-5C.78/04.V<cr>
1!!!!!<tab>DSORTS<tab><tab>VERSION 08<tab>EDIT 03<tab><tab>78/04<cr>
*2AL<cr>
!!!!!<tab>Copyright (C) 1972,73,74,75,76,77,<lf>
*G.77,.V<cr>
!!!!!<tab>Copyright (C) 1972,73,74,75,76,77,<lf>
*I.78,.V<cr>
!!!!!<tab>Copyright (C) 1972,73,74,75,76,77,78,<lf>
*H.V08-.V<cr>
15<tab>PRINT " DSORTS V08-02"; IF T7%<cr>
*2C.03.V<cr>
15<tab>PRINT " DSORTS V08-03"; IF T7%<cr>
*H.29410 ON.V<cr>
29410 ON ERROR GOTO 29470 : GOTO 29440 IF P%(V2%)<0%<cr>
*G.29470.K<cr>
*I<cr>
<cr>
<esc>*V<cr>
29420 GOTO 29460 IF V1% >= P%(V2%) AND P%(V2%)+P%(V2%+2%) > V1%<cr>
*G.29560<tab>.V<cr>
29560<tab>ON ERROR GOTO 32710:<lf>
*4AL<cr>
<tab>P%(V2%)=-1%:<tab>ON ERROR GOTO 0:<tab>RETURN<cr>
*G.-1%.0K<cr>
*I.<tab>V1%=0%:<tab>GOSUB 29440.V<cr>
<tab>V1%=0%:<tab>GOSUB 29440:<tab>ON ERROR GOTO 0:<tab>RETURN<cr>
*EX<cr>
```

Now recompile the program into your library with protection code <104>.

DMS-500 V2
for RSTS/E V7
DSORTM V08-01

MISPLACED KEY FILE DURING MERGE - MANDATORY DSORTM PATCH (FH)

PROBLEM:

If you use an explicit account number in referencing data or key files, DSORT may create certain work files in an incorrect account, thereby causing it to fail with a RSTS/E error message during the merge phase.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DSORTM source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: DSORTM.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DSORTM.BAS=DSORTM.BAS
#[logfile=]
*H.EDIT 02.V<cr>
1!!!!!<tab>DSORTM<tab><tab>VERSION 08<tab>EDIT 02<tab><tab>76/03/29<cr>
*G.29.-7C.9/03.V<cr>
1!!!!!<tab>DSORTM<tab><tab>VERSION 08<tab>EDIT 02<tab><tab>79/03<cr>
*H.1972,.V<cr>
!!!!!<tab>Copyright (C) 1972,73,74,75,76,<1f>
*12C.76,79,.V<cr>
!!!!!<tab>Copyright (C) 1972,76,79,<1f>
*H.V08-01.V<cr>
40<tab>PRINT " DSORTM V08-01"; IF T7%<cr>
*-C.2.V<cr>
40<tab>PRINT " DSORTM V08-02"; IF T7%<cr>
```

```
*H.30060<tab>.V<cr>
30060<tab>DEF FND$:<lf>
*AL<cr>
<tab>FND$=MID(P$(1%),1%,INSTR(1%,P$(1%),":")):<lf>
*G.:.-C.].V<cr>
<tab>FND$=MID(P$(1%),1%,INSTR(1%,P$(1%),"]")):<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile this program and re-enter it in the system library, type the following RSTS/E commands.

```
OLD DSORTM.BAS

Ready

COMPILE $DSORTM<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this program.

INSTALLING DMS-5ØØ VØ2 ON RSTS/E V7.Ø

Prior to the installation of DMS-5ØØ VØ2 on RSTS/E V7.Ø, you must be running under the BASIC-PLUS Run-Time System. If you are not, you must first switch run-time systems. For example,

```
RUN $SWITCH<cr>
Run-Time System to switch to? BASIC<cr>

Ready
```

Various error messages may appear during the running of the demonstration program as part of the installation procedure. These problems will be corrected by the auto-patch kit.

Note that optional patch file PA24Ø1.CMD, included in Patch Kit "A" of the RSTS/E V7.Ø distribution kit, will repeat just the demonstration portion of the installation procedure.

NOTE

DMS-5ØØ VØ2 does not support large files (greater than 65535 blocks) on RSTS/E V7.Ø.

RSTS/E 278Ø Package V3.Ø
for RSTS/E V7.Ø
RJ278Ø

FAILURE TO CLEAR 'JOB ACTIVE' ON ATTACH - MANDATORY RJ278Ø PATCH

NOTE

This patch appeared in an earlier issue of the RSTS/E VØ6B-Ø2 Software Dispatch (September, 1977) as a patch to the RSTS/E VØ6B RJ278Ø.BAS program. Since the same program is used under the V7.Ø system, this patch is republished for the RSTS/E V7.Ø Release Notes. Because of this, the edit level remains at "VØ6B-Ø3". If you have applied the earlier VØ6B patch, do not apply this patch again.

PROBLEM:

Once RJ278Ø has been put into SPOOL mode, an ATTACH should cause any job being sent by QUEMAN to be REQUEUEd, and all variables in the RJ278Ø program itself concerning that job to be cleared. Processing should then resume, taking input from the terminal to which the program is ATTACHed. When SPOOL mode is re-entered, the same job should be sent by QUEMAN, and processed by the RJ278Ø program. Instead, the RJ278Ø program becomes confused when it receives a new SPOOL command, and the NEWJOB sent by QUEMAN causes an error message and the job is not processed.

SOLUTION:

The following patch causes reset of all variables upon ATTACH.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RJ278Ø.BAS=RJ278Ø.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            :       Ø3
*G/Ø3/I/A/V<cr>
6!              EDIT            :       Ø3A
```

```
*H/7!/V<cr>
7!              EDIT DATE       :       Ø2-JUN-77
*G/Ø2-JUN-77/-9C/Ø6-JUL-77/V<cr>
7!              EDIT DATE       :       Ø6-JUL-77
*H/21!/V<cr>
21!     VER/ED          EDIT DATE       REASON
*G/REASON/I<cr>
<lf>
  !<tab>6B-Ø3A<tab><tab>6-JUL-77<tab>FIX ATTACH/DETACH PROBLEM WITH<lf>
  !<tab><tab><tab><tab><tab>QUEMAN COMMUNICATION.<esc>*V<cr>
  !                                     QUEMAN COMMUNICATION.
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="VØ6B-Ø3"
*G/Ø3/I/A/V<cr>
1Ø1Ø    I$="VØ6B-Ø3A"
*H/1492<tab>/V<cr>
1492    M$="ATTACH"
*G/DETACH%=/V<cr>
        \ DETACH%=((E3% AND 1%)<>Ø%)
*ØAI<cr>
<tab>\ INJOB%,ABTJOB%=Ø%<lf>
<esc>*V<cr>
        \ DETACH%=((E3% AND 1%)<>Ø%)
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD RJ278Ø<cr>

Ready

COMPILE $RJ278Ø<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure.

RSTS/E 278Ø Package V3.Ø
for RSTS/E V7.Ø
RJ278Ø

LOCAL BINARY TRANSMIT FAILURE - MANDATORY RJ278Ø PATCH

NOTE

RJ278Ø.BAS as released with RSTS/E VØ6B is used on all VØ6B and later versions of RSTS/E. For this reason, the edit level of the program remains at "VØ6B-Ø3".

PROBLEM:

If the default transmit command is 278Ø or GEN, it should be possible to send, as part of a multiple file transfer, a file or files in binary mode. This is done by using the "/B" switch to override the transmit command for those files which should be sent untranslated. Currently, the mode of the first file of a multiple file transfer controls the mode for the complete transfer.

SOLUTION:

The patching procedure detailed below will correct this problem.

NOTE

The mandatory 278Ø Device Driver patch described in article Seq 5.1.9 M, published in these notes, must be installed along with this patch.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RJ278Ø.BAS=RJ278Ø.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            :       Ø3A
*G/Ø3A/I/B/V<cr>
6!              EDIT            :       Ø3AB
```

```
*H/7!/V<cr>
7!              EDIT DATE       :       Ø6-JUL-77
*G/Ø6-JUL-77/-9C/23-MAR-79/V<cr>
7!              EDIT DATE       :       23-MAR-79
*H/21!/G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6B-Ø3AB<tab><tab>23-MAR-79<tab>FIX LOCAL BINARY PROBLEM.<esc>*V<cr>
  !     6B-Ø3AB         23-MAR-79       FIX LOCAL BINARY PROBLEM.
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="V Ø6B-Ø3A"
*G/Ø3A/I/B/V<cr>
1Ø1Ø    I$="V Ø6B-Ø3AB"
*H/4Ø1Ø<tab>/V<cr>
4Ø1Ø    FIELD #1%, 134% AS B1$
*1ØAV<cr>
                ! FIELD THE RJ: BUFFER.
*I<cr>
<tab>\ PUTBIN%=NEWBIN%<lf>
<esc>*V<cr>
                ! FIELD THE RJ: BUFFER.
*H/413Ø<tab>/V<cr>
413Ø    F$=LEFT(CHR$(27%)+F$,MAXLEN%) IF X.TEST% AND 128%
*8AV<cr>
        \  RETURN
*I<cr>
<tab>\ PUTBIN%=NEWBIN%<lf>
<esc>*V<cr>
        \  RETURN
*H/423Ø<tab>/V<cr>
423Ø    E%,E2%=Ø%
*3AV<cr>
        \ PUTBIN%=(R% OR (B1% AND B2%)) AND 1%
*G/PUTBIN/-6C/NEWBIN/V<cr>
        \ NEWBIN%=(R% OR (B1% AND B2%)) AND 1%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD RJ278Ø<cr>

Ready

COMPILE $RJ278Ø<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure.

RSTS/E V7.Ø
DECnet/E Utilities V1.Ø
Package Notes

INSTALLING DECNET/E V1.Ø ON RSTS/E V7.Ø

Prior to the installation of DECnet/E V1.Ø on RSTS/E V7.Ø, you must be running under the BASIC-PLUS Run-Time System. If you are not, you must first switch run-time systems. For example,

```
RUN $SWITCH<cr>
Run-Time System to switch to? BASIC<cr>

Ready
```

Prior to the installation of DECnet/E V1.Ø on RSTS/E V7.Ø, LB: must be assigned to SY:[1,1].

NCP ALLOWS INVALID NODE ADDRESS IN DEFINE NODE COMMAND - MANDATORY NCP PATCH

PROBLEM:

NCP allows a node address of 1 to be specified with the define node command. This is in violation of the NSP protocol. The valid range for node addresses is 2 to 24Ø.

SOLUTION:

The patching procecure detailed below corrects the above problem.

NOTE

When applying this patch, and if you are communicating with RSX family or IAS nodes, please insure that that node has installed the optional patch Seq 1Ø.2Ø.7.3 0 as published in the June 1978 issue of the RSX-11M Software Dispatch and the RSX-11D/IAS Software Dispatch.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - NCP.BAS=NCP.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3
*G/Ø3/I/A/V<cr>
6!              EDIT            : Ø3A
*H/7!/V<cr>
7!              EDIT DATE       : 3Ø-JAN-78
*G/3Ø-JAN-78/-9C/1Ø-MAY-78/V<cr>
7!              EDIT DATE       : 1Ø-MAY-78
```

```
*H/20/V<cr>
20      !
*G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-03A<tab><tab>10-MAY-78<tab>SET NODE ADDRESS RANGE TO 2-240<esc>*V<cr>
  !     6C-03A          10-MAY-78       SET NODE ADDRESS RANGE TO 2-240
*H/1010<tab>/V<cr>
1010    I$="V06C-03"
*G/03/I/A/V<cr>
1010    I$="V06C-03A"
*H/7530<tab>/V<cr>
7530    GOTO 9100 IF FNGPRM%(TEXT2.MSG$,NUM1$(NODE.ADDR%))
*3AV<cr>
        \ Z0%=FNINT.VAL%(Z$,1%,240%)
*G/1%/-2C/2%/V<cr>
        \ Z0%=FNINT.VAL%(Z$,2%,240%)
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD NCP<cr>

Ready

COMPILE $NCP<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program may now be removed from the public structure.

DECnet/E Utilities V1.Ø
for RSTS/E V7.Ø
NCU

NCU DOES NOT CORRECTLY HANDLE DETECTION OF ANOTHER NCU - MANDATORY NCU PATCH

PROBLEM:

If another copy of NCU is running, NCU goes into an infinite loop when extending the buffer file used for loop test.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - NCU.BAS=NCU.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3
*G/Ø3/I/A/V<cr>
6!              EDIT            : Ø3A
*H/7!/V<cr>
7!              EDIT DATE       : 3Ø-JAN-78
*G/3Ø-JAN-78/-9C/Ø4-APR-78/V<cr>
7!              EDIT DATE       : Ø4-APR-78
*H/2Ø/V<cr>
2Ø      !
*G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
 !<tab>6C-Ø3A<tab><tab>Ø4-APR-78<tab>KILL BUFFER FILE SO TWO CAN NOT RUN.<esc>*V<cr>
 !      6C-Ø3A          Ø4-APR-78       KILL BUFFER FILE SO TWO CAN NOT RUN.
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="VØ6C-Ø3"
*G/Ø3/I/A/V<cr>
1Ø1Ø    I$="VØ6C-Ø3A"
```

```
*H/17ØØ/V<cr>
17ØØ     OPEN    "$NCUBUF.SYS" AS FILE 7%
*AV<cr>
        \ LOOP.DATA$(8%) = NULL$
*I<cr>
<tab>\ KILL "$NCUBUF.SYS"<lf>
<esc>*V<cr>
        \ LOOP.DATA$(8%) = NULL$
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD NCU<cr>

Ready

COMPILE $NCU<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program may now be removed from the public structure.

DECnet/E Utilities V1.Ø
for RSTS/E V7.Ø
NCU

NCU DOES NOT CORRECTLY SET ITS RUN BURST AND PRIORITY - MANDATORY NCU PATCH

PROBLEM:

NCU does not correctly set its RUN BURST and PRIORITY at startup.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - NCU.BAS=NCU.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!                EDIT              : Ø3A
*G/Ø3A/I/B/V<cr>
6!                EDIT              : Ø3AB
*H/7!/V<cr>
7!                EDIT DATE         : Ø4-APR-78
*G/Ø4-APR-78/-9C/Ø8-AUG-78/V<cr>
7!                EDIT DATE         : Ø8-AUG-78
*H/2Ø/V<cr>
2Ø       !
*G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-Ø3AB<tab><tab>Ø8-AUG-78<tab>FIX CALL TO SET PRIORITY AND<lf>
  !<tab><tab><tab><tab><tab>ALLOW RUN-BURST TO BE NON MULTIPLE OF 6<esc>*V<cr>
  !                                        ALLOW RUN-BURST TO BE NON MULTIPLE OF 6
```

```
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø     I$="VØ6C-Ø3A"
*G/Ø3A/I/B/V<cr>
1Ø1Ø     I$="VØ6C-Ø3AB"
*H/2Ø4Ø<tab>/V<cr>
2Ø4Ø     GOTO 2Ø9Ø UNLESS FNR%("RUNBURST",3%)
*AV<cr>
         \ Z%=FNINT.VAL%(CØ$,6%,255%)
*G/Z%/-2C/RUNB%/V<cr>
         \ RUNB%=FNINT.VAL%(CØ$,6%,255%)
*G/6%/-2C/1%/V<cr>
         \ RUNB%=FNINT.VAL%(CØ$,1%,255%)
*AV<cr>
         \ GOTO 2ØØØ IF Z%=999%
*G/Z%/-2C/RUNB%/V<cr>
         \ GOTO 2ØØØ IF RUNB%=999%
*AV<cr>
         \ RUNB%=Ø%
*K<cr>
*V<cr>
         \ RUNB%=RUNB%+6% UNTIL RUNB% >= Z%
*K<cr>
*H/2Ø6Ø<tab>/V<cr>
2Ø6Ø     Z$=SYS(CHR.6$+CHR$(-13%)
*G/-13%)/I/+CHR.M1$/V<cr>
2Ø6Ø     Z$=SYS(CHR.6$+CHR$(-13%)+CHR.M1$
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD NCU<cr>

Ready

COMPILE $NCU<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program may now be removed from the public structure.

TLK DOES NOT CHECK TO SEE IF LSN JOB NUMBER EXISTS - MANDATORY TLK PATCH

PROBLEM:

If the receiving terminal in a TLK dialogue is busy, LSN outputs a message indicating the TLK command line which should be typed to continue the dialogue. This command line is in the form "/LSNjobnumber source-node:: source-terminal:". TLK outputs an error message of '?COMMAND SYNTAX ERROR - ODD ADDRESS TRAP' if you specify a job number for which there is no active job.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - TLK.BAS=TLK.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3
*G/Ø3/I/A/V<cr>
6!              EDIT            : Ø3A
*H/7!/V<cr>
7!              EDIT DATE       : 3Ø-JAN-78
*G/3Ø-JAN-78/-9C/1Ø-MAY-78/V<cr>
7!              EDIT DATE       : 1Ø-MAY-78
*H/2Ø/V<cr>
2Ø      !
*G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-Ø3A<tab><tab>1Ø-MAY-78<tab>MAKE SURE JOB IS ALIVE ON ATTACH.<esc>*V<cr>
  !     6C-Ø3A          1Ø-MAY-78       MAKE SURE JOB IS ALIVE ON ATTACH.
```

```
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø     I$="V06C-Ø3"
*G/Ø3/I/A/V<cr>
1Ø1Ø     I$="V06C-Ø3A"
*H/1ØØ2Ø<tab>/V<cr>
1ØØ2Ø    E$="Command Syntax error - "
*14AV<cr>
         \ RIB%=PEEK(PEEK(PEEK(JOBTBL%+2%*LSN.JOB%)+8%)+18%)
*KV<cr>
         \ GOTO 1Ø22Ø IF RIB%=Ø%
*I<cr>
<tab>\ JDB% = PEEK(JOBTBL%+2%*LSN.JOB%)<lf>
<tab>\ GOTO 1Ø2ØØ UNLESS JDB% <> Ø%<lf>
<tab>\ RIB% = PEEK(PEEK(JDB%+8%)+18%)<lf>
<esc>*V<cr>
         \ GOTO 1Ø22Ø IF RIB%=Ø%
*17AV<cr>
                  ! BY FIRST INSURING THAT IT'S A LEGAL JOB # (<=MAXCNT).
*G/)/I/ AND ACTIVE/V<cr>
                  ! BY FIRST INSURING THAT IT'S A LEGAL JOB # (<=MAXCNT) AND ACTIVE.
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD TLK<cr>

Ready

COMPILE $TLK<232><cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program may now be removed from the public structure.

NODE NAMES OF LESS THAN 6 CHARACTERS NOT ACCEPTED - MANDATORY NCROOT PATCH

PROBLEM:

NETCPY does not pad node names to six characters with nulls. This causes NETCPY to give an INVALID NODE SPECIFICATION error on node names less than six characters long.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears on the patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the indicated corrections manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - NCROOT.BAS=NCROOT.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3
*G/Ø3/I/A/V<cr>
6!              EDIT            : Ø3A
*H/7!/V<cr>
7!              EDIT DATE       : 3Ø-JAN-78
*G/3Ø-JAN-78/-9C/16-FEB-78/V<cr>
7!              EDIT DATE       : 16-FEB-78
*H/2Ø/V<cr>
2Ø      !
*G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-Ø3A<tab><tab>16-FEB-78<tab>PAD NODENAME TO 6 CHAR FOR CI.<esc>*V<cr>
  !     6C-Ø3A          16-FEB-78       PAD NODENAME TO 6 CHAR FOR CI.
```

```
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø     I$="V06C-Ø3"
*G/Ø3/I/A/V<cr>
1Ø1Ø     I$="V06C-Ø3A"
*H/1Ø8Ø<tab>/V<cr>
1Ø8Ø     OØ$=LEFT(A$,I%-1%)
*5AV<cr>
         \ IØ$=RIGHT(A$,I%+1%)
*I<cr>
<tab>\ TO.NODE.NAME$ = FNPAD$(TO.NODE.NAME$,6%)<lf>
<esc>*V<cr>
         \ IØ$=RIGHT(A$,I%+1%)
*4AV<cr>
         \ IØ$ = RIGHT(IØ$,I2%+2%) IF I2%
*I<cr>
<tab>\ FROM.NODE.NAME$ = FNPAD$(FROM.NODE.NAME$,6%)<lf>
<esc>*V<cr>
         \ IØ$ = RIGHT(IØ$,I2%+2%) IF I2%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD NCROOT<cr>

Ready

APPEND $NETFNC.BAS<cr>

Ready

COMPILE $NETCPY<232><cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program may now be removed from the public structure.

DECnet/E Utilities V1.Ø
for RSTS/E V7.Ø
NCROOT

NETCPY DOES NOT ALLOW COPIES BETWEEN MM: AND MT: - MANDATORY NCROOT PATCH

PROBLEM:

NETCPY gives a MUST HAVE SAME TYPE DEVICES error on a copy between an MM: and an MT:.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - NCROOT.BAS=NCROOT.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3A
*G/Ø3A/I/B/V<cr>
6!              EDIT            : Ø3AB
*H/7!/V<cr>
7!              EDIT DATE       : 16-FEB-78
*G/16-FEB-78/-9C/14-APR-78/V<cr>
7!              EDIT DATE       : 14-APR-78
*H/2Ø/V<cr>
2Ø      !
*G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-Ø3AB<tab><tab>14-APR-78<tab>ALLOW MM: TO MT: COPY<esc>*V<cr>
  !     6C-Ø3AB         14-APR-78       ALLOW MM: TO MT: COPY
```

```
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="VØ6C-Ø3A"
*G/Ø3A/I/B/V<cr>
1Ø1Ø    I$="VØ6C-Ø3AB"
*H/11ØØ<tab>/V<cr>
11ØØ    E1%=3Ø%
*6AV<cr>
        \ IF LEFT(IØ$,2%)<>LEFT(OØ$,2%) THEN
*G/IF /I/(/V<cr>
        \ IF (LEFT(IØ$,2%)<>LEFT(OØ$,2%) THEN
*G/OØ$,2%)/I/)/V<cr>
        \ IF (LEFT(IØ$,2%)<>LEFT(OØ$,2%)) THEN
*I<cr>
<lf>
<tab><tab>AND ((LEFT(IØ$,2%)<>"MM" AND LEFT(IØ$,2%)<>"MT") OR<lf>
<tab><tab><tab>(LEFT(OØ$,2%)<>"MM" AND LEFT(OØ$,2%)<>"MT"))<esc>*V<cr>
                        (LEFT(OØ$,2%)<>"MM" AND LEFT(OØ$,2%)<>"MT")) THEN
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD NCROOT<cr>

Ready

APPEND $NETFNC.BAS<cr>

Ready

COMPILE $NETCPY<232><cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program may now be removed from the public structure.

CREATE NFT/FAL OBJECT LIBRARY FOR PATCHING - MANDATORY NFT/FAL PATCH

PROBLEM:

The NETSUB library (including NFT and FAL) and the overlay description files, NFT.ODL and FAL.ODL, must be available for patching. After patching the OBJs the library file must be retained so that succeeding patches can be applied without having to reapply the earlier patches. These necessary files were not saved at the time of DECnet/E installation.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purpose of this discussion, we will assume that the DECnet/E distribution kit is available and assigned with a logical name of I:.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $PIP.SAV<cr>
*SY:=I:$NETSUB.OLB<cr>
*SY:=I:$FAL.OBJ<cr>
*SY:=I:$FAL.ODL<cr>
*SY:=I:$NFT.OBJ<cr>
*SY:=I:$NFT.ODL<cr>
*^Z

Ready

RUN $LBR.TSK<cr>
LBR>NETSUB.OLB/IN=NFT.OBJ/-EP<cr>
LBR>NETSUB.OLB/IN=FAL.OBJ/-EP<cr>
LBR>^Z

Ready
```

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - NFT.ODL=NFT.ODL<cr>
#NFT.LOG=KB:<cr>
*H/.ROOT/V<cr>
.ROOT   NET:NFT-NFTØ-NFT1-RMSROT-RMSALL
*G?NET:?I?NETSUB/LB:?V<cr>
.ROOT   NET:NETSUB/LB:NFT-NFTØ-NFT1-RMSROT-RMSALL
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - FAL.ODL=FAL.ODL<cr>
#NFT.LOG=KB:<cr>
*H/.ROOT/V<cr>
.ROOT   NET:FAL-FALØ-FAL1-RMSROT-RMSALL
*G?NET:?I?NETSUB/LB:?<cr>V<cr>
.ROOT   NET:NETSUB/LB:FAL-FALØ-FAL1-RMSROT-RMSALL
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD
#^Z
File to patch - ^Z

Ready

RUN $PIP.SAV<cr>
*LB:=NETSUB.OLB,NFT.ODL,FAL.ODL<cr>
*NETSUB.OLB,FAL.OBJ,FAL.ODL,NFT.OBJ,NFT.ODL/DE<cr>
*^Z

Ready
```

DECnet/E Utilities V1.Ø
for RSTS/E V7.Ø
NFT

RSTS/E-RT11 DIFFERENT BLOCK NUMBER FOR FIRST BLOCK OF FILE - MANDATORY NFT PATCH

PROBLEM:

NFT on RSTS/E and RT11 differ in the number of the first block in a file. RSTS/E uses 1 while RT11 uses Ø for the block number of the first block of a file. This causes the first block to get lost or to be copied twice when transferring files between RT11 and RSTS/E in block mode.

SOLUTION:

The patching procedure detailed below corrects the above problem.

NOTE

The mandatory FAL program patch described in article Seq 31.11.1M must be installed along with this patch.

PROCEDURE:

1. For purposes of this discussion, we will assume that the program to be patched is located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

2. The command file for this patch appears in patch kit version "A" or later.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $PIP.SAV<cr>
*NFTØØ2.MAC=KB:<cr>
<tab>.TITLE NFT<tab>NETWORK FILE TRANSFER UTILITY<cr>
<tab>.IDENT<tab>"Ø6C.Ø59"<cr>
<tab>.PSECT<tab>NFT<cr>
$$BASE = .<cr>
.=<tab>$$BASE+5366<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
.=<tab>$$BASE+7672<cr>
<tab>.WORD Ø<cr>
.=<tab>$$BASE<cr>
.END<cr>
^Z
*^Z

Ready
```

```
RUN $MAC.TSK<cr>
MAC>NFTØØ2=NFTØØ2<cr>
MAC>^Z

Ready

RUN $LBR.TSK<cr>
LBR>NFT.OBJ=LB:NETSUB.OLB/EX:NFT<cr>
LBR>^Z

Ready

RUN $PAT.TSK<cr>
PAT>NFTNEW.OBJ=NFT.OBJ/CS:137767,NFTØØ2.OBJ/CS:Ø1ØØØ5<cr>
PAT>^Z

Ready

RUN $LBR.TSK<cr>
LBR>LB:NETSUB.OLB/RP=NFTNEW.OBJ/-EP<cr>

MODULE "NFT    " REPLACED
LBR>^Z

Ready

RUN $UTILTY<cr>
<UTILTY's header line>
#REMOVE LOGICAL NET<cr>                  <NOTE: this may generate an error>
#ADD LOGICAL LB: NET<cr>
#REMOVE LOGICAL RMS<cr>                  <NOTE: this may generate an error>
#ADD LOGICAL LB: RMS<cr>
#^Z

Ready

RUN $TKB.TSK<cr>
TKB>NFT/PI,NFT=NET:NFT.ODL/MP<cr>
ENTER OPTIONS:
TKB>STACK=1Ø24<cr>
TKB>HISEG=RMS11<cr>
TKB>//<cr>

Ready

RUN $PIP.SAV<cr>
*SY:$NFT.TSK<232>=NFT.TSK<cr>
*NFTØØ2.OBJ,NFTØØ2.MAC,NFT.OBJ,NFTNEW.OBJ/DE<cr>
*^Z

Ready
```

DECnet/E Utilities V1.Ø
for RSTS/E V7.Ø
NFT

INCORRECT DEFAULT FOR MAXIMUM RECORD SIZE ATTRIBUTE - MANDATORY NFT/FAL PATCH

PROBLEM:

NFT and FAL on RSTS/E use a default maximum record size (MRS) of 512 bytes. If a file with a maximum record size of Ø (no limit on record size) is copied using NFT, the copy of the file will have a maximum record size of 512 instead of Ø.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of this discussion, we will assume that the program to be patched is located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

2. The command file for this patch appears in patch kit version "A" or later.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $PIP.SAV<cr>
*RMSØØ3.MAC=KB:<cr>
<tab>.TITLE<tab>RMSFAR<tab>RMS FILE ACCESS ROUTINES<cr>
<tab>.IDENT<tab>"Ø6C.ØØ5"<cr>
<tab>.PSECT<tab>RMSFAR<cr>
$$BASE = .<cr>
. = $$BASE+66<cr>
<tab>.WORD<tab>Ø<cr>
. = $$BASE<cr>
<tab>.END<cr>
^Z
*^Z

Ready

RUN $MAC.TSK<cr>
MAC>RMSØØ3=RMSØØ3<cr>
MAC>^Z

Ready

RUN $LBR.TSK<cr>
LBR>RMSFAR.OBJ=LB:NETSUB.OLB/EX:RMSFAR<cr>
LBR>^Z

Ready
```

```
RUN $PAT.TSK<cr>
PAT>RMSNEW.OBJ=RMSFAR.OBJ/CS:124336,RMSØØ3.OBJ/CS:ØØ611Ø<cr>
PAT>^Z

Ready

RUN $LBR.TSK<cr>
LBR>LB:NETSUB.OLB/RP=RMSNEW.OBJ<cr>

MODULE "RMSFAR" REPLACED
LBR>^Z

Ready

RUN $UTILTY<cr>
<UTILTY's header line>
#REMOVE LOGICAL NET<cr>                    <NOTE: this may generate an error>
#ADD LOGICAL LB: NET<cr>
#REMOVE LOGICAL RMS<cr>                    <NOTE: this may generate an error>
#ADD LOGICAL LB: RMS<cr>
#^Z

Ready

RUN $TKB.TSK<cr>
TKB>FAL/PI,FAL=NET:FAL.ODL/MP<cr>
ENTER OPTIONS:
TKB>STACK=1Ø24<cr>
TKB>HISEG=RMS11<cr>
TKB>//<cr>

Ready

RUN $TKB.TSK<cr>
TKB>NFT/PI,NFT=NET:NFT.ODL/MP<cr>
ENTER OPTIONS:
TKB>STACK=1Ø24<cr>
TKB>HISEG=RMS11<cr>
TKB>//<cr>

Ready

RUN $PIP.SAV<cr>
*SY:$FAL.TSK<232>=FAL.TSK<cr>
*SY:$NFT.TSK<232>=NFT.TSK<cr>
*RMSØØ3.MAC,RMSØØ3.OBJ,RMSFAR.OBJ,RMSNEW.OBJ/DE<cr>
*^Z

Ready
```

RESOLUTION OF BLOCK NUMBER PROBLEM BETWEEN RSTS/E-RT11 - MANDATORY NFT PATCH

PROBLEM:

As described in article Seq 31.1Ø.2 M, published in these Release Notes, NFT on RSTS/E and RT11 differ in the number of the first block in a file. This situation has changed since publication of that article, and RSTS/E and RT11 now number the first block of a file in the same manner.

SOLUTION:

The patching procedure detailed below resolves the above problem.

NOTE

The mandatory FAL program patch described in article Seq 31.11.3 M must be installed along with this patch.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required files to be patched are located on the public disk structure. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $PIP.SAV<cr>
*NFTØØ4.MAC=KB:<cr>
<tab>.TITLE<tab>NFT<tab>NETWORK FILE TRANSFER UTILITY<cr>
<tab>.IDENT<tab>"Ø6C.Ø59"<cr>
<tab>.PSECT<tab>NFT<cr>
$$BASE = .<cr>
.=<tab>$$BASE+5366<cr>
<tab>ADD<tab>#1,46(RØ)<cr>
<tab>ADC<tab>5Ø(RØ)<cr>
.=<tab>$$BASE+7672<cr>
<tab>.WORD<tab>1<cr>
.=<tab>$$BASE<cr>
.END<cr>
^Z
*^Z

Ready
```

```
RUN $MAC.TSK<cr>
MAC>NFTØØ4=NFTØØ4<cr>
MAC>^Z

Ready

RUN $LBR.TSK<cr>
LBR>NFT.OBJ=LB:NETSUB.OLB/EX:NFT<cr>
LBR>^Z

Ready

RUN $PAT.TSK<cr>
PAT>NFTNEW.OBJ=NFT.OBJ/CS:143610,NFTØØ4.OBJ/CS:ØØ74Ø5<cr>
PAT>^Z

Ready

RUN $LBR.TSK<cr>
LBR>LB:NETSUB.OLB/RP=NFTNEW.OBJ/-EP<cr>

MODULE "NFT   " REPLACED
LBR>^Z

Ready

RUN $UTILTY<cr>
<UTILTY's header line>
#REMOVE LOGICAL NET<cr>                  <NOTE: this may generate an error>
#ADD LOGICAL LB: NET<cr>
#REMOVE LOGICAL RMS<cr>                  <NOTE: this may generate an error>
#ADD LOGICAL LB: RMS<cr>
#^Z

Ready

RUN $TKB.TSK<cr>
TKB>NFT/PI,NFT=NET:NFT.ODL/MP<cr>
ENTER OPTIONS:
TKB>STACK=1Ø24<cr>
TKB>HISEG=RMS11<cr>
TKB>//<cr>

Ready

RUN $PIP.SAV<cr>
*SY:$NFT.TSK<232>=NFT.TSK<cr>
*NFTØØ4.OBJ,NFTØØ4.MAC,NFT.OBJ,NFTNEW.OBJ/DE<cr>
*^Z

Ready
```

DECnet/E Utilities V1.Ø
for RSTS/E V7.Ø
FAL

RSTS/E-RT11 DIFFERENT BLOCK NUMBER FOR FIRST BLOCK OF FILE - MANDATORY FAL PATCH

PROBLEM:

FAL on RSTS/E and RT11 differ in the number of the first block in a file. RSTS/E uses 1 while RT11 uses Ø for the block number of the first block of a file. This causes the first block to get lost or to be copied twice when transferring files between RT11 and RSTS/E in block mode.

SOLUTION:

The patching procedure detailed below corrects the above problem.

NOTE

The mandatory NFT program patch described in article Seq 31.1Ø.2M must be installed along with this patch.

PROCEDURE:

1. For purposes of this discussion, we will assume that the program to be patched is located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

2. The command file for this patch appears in patch kit version "A" or later.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $PIP.SAV<cr>
*FALØØ1.MAC=KB:<cr>
<tab>.TITLE FAL<tab>FILE ACCESS LISTENER<cr>
<tab>.IDENT<tab>"Ø6C.41"<cr>
<tab>.PSECT<tab>FAL<cr>
$$BASE = .<cr>
.=<tab>$$BASE+1412<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
.=<tab>$$BASE+16Ø6<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
<tab>NOP<cr>
.=<tab>$$BASE<cr>
.END<cr>
^Z
*^Z

Ready
```

```
RUN $MAC.TSK<cr>
MAC>FALØØ1=FALØØ1<cr>
MAC>^Z

Ready

RUN $LBR.TSK<cr>
LBR>FAL.OBJ=LB:NETSUB.OLB/EX:FAL<cr>
LBR>^Z

Ready

RUN $PAT.TSK<cr>
PAT>FALNEW.OBJ=FAL.OBJ/CS:145264,FALØØ1.OBJ/CS:Ø1ØØ33<cr>
PAT>^Z

Ready

RUN $LBR.TSK<cr>
LBR>LB:NETSUB.OLB/RP=FALNEW.OBJ/-EP<cr>

MODULE "FAL   " REPLACED
LBR>^Z

Ready

RUN $UTILTY<cr>
<UTILTY's header line>
#REMOVE LOGICAL NET<cr>                  <NOTE: this may generate an error>
#ADD LOGICAL LB: NET<cr>
#REMOVE LOGICAL RMS<cr>                  <NOTE: this may generate an error>
#ADD LOGICAL LB: RMS<cr>
#^Z

Ready

RUN $TKB.TSK<cr>
TKB>FAL/PI,FAL=NET:FAL.ODL/MP<cr>
ENTER OPTIONS:
TKB>STACK=1Ø24<cr>
TKB>HISEG=RMS11<cr>
TKB>//<cr>

Ready

RUN $PIP.SAV<cr>
*SY:$FAL.TSK<232>=FAL.TSK<cr>
*FALØØ1.OBJ,FALØØ1.MAC,FALNEW.OBJ,FAL.OBJ/DE<cr>
*^Z

Ready
```

DECnet/E Utilities V1.Ø
for RSTS/E V7.Ø
FAL

SET ONE SHOT BIT IN FAL'S DECLARE RECEIVER - MANDATORY FAL PATCH

PROBLEM:

FAL is an eligible receiver for a CONNECT after a disconnect is queued for it. FAL after receiving the disconnect does a REMOVE RECEIVER. If a CONNECT is queued to FAL when it does the REMOVE RECEIVER the CONNECT will be rejected.

SOLUTION:

The patching procedure detailed below corrects the above problem.

NOTE

The mandatory DECnet/E NSP patch described in article Seq 6.1.1 M must be installed along with this patch.

PROCEDURE:

1. For purposes of this discussion, we will assume that the program to be patched is located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

2. The command file for this patch appears in patch kit version "A" or later.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $PIP.SAV<cr>
*FALØØ2.MAC=KB:<cr>
<tab>.TITLE FAL<tab>FILE ACCESS LISTENER<cr>
<tab>.IDENT<tab>"Ø6C.41"<cr>
<tab>.PSECT<tab>IMPURE<cr>
$$IMPB = .<cr>
.=<tab>$$IMPB+1565<cr>
<tab>.BYTE<tab>8.+4.<cr>
<tab>.PSECT<tab>FAL<cr>
$$BASE = .<cr>
.=<tab>$$BASE+3224<cr>
<tab>JMP<tab>1Ø$<cr>
.=<tab>$$BASE+3466<cr>
1Ø$:<cr>
.=<tab>$$BASE<cr>
.END<cr>
^Z
*^Z

Ready
```

```
RUN $MAC.TSK<cr>
MAC>FALØØ2=FALØØ2<cr>
MAC>^Z

Ready

RUN $LBR.TSK<cr>
LBR>FAL.OBJ=LB:NETSUB.OLB/EX:FAL<cr>
LBR>^Z

Ready

RUN $PAT.TSK<cr>
PAT>FALNEW.OBJ=FAL.OBJ/CS:151371,FALØØ2.OBJ/CS:ØØ7235<cr>
PAT>^Z

Ready

RUN $LBR.TSK<cr>
LBR>LB:NETSUB.OLB/RP=FALNEW.OBJ/-EP<cr>

MODULE "FAL    " REPLACED
LBR>^Z

Ready

RUN $UTILTY<cr>
<UTILTY's header line>
#REMOVE LOGICAL NET<cr>                  <NOTE: this may generate an error>
#ADD LOGICAL LB: NET<cr>
#REMOVE LOGICAL RMS<cr>                  <NOTE: this may generate an error>
#ADD LOGICAL LB: RMS<cr>
#^Z

Ready

RUN $TKB.TSK<cr>
TKB>FAL/PI,FAL=NET:FAL.ODL/MP<cr>
ENTER OPTIONS:
TKB>STACK=1Ø24<cr>
TKB>HISEG=RMS11<cr>
TKB>//<cr>

Ready

RUN $PIP.SAV<cr>
*SY:$FAL.TSK<232>=FAL.TSK<cr>
*FALØØ2.OBJ,FALØØ2.MAC,FALNEW.OBJ,FAL.OBJ/DE<cr>
*^Z

Ready
```

DECnet/E Utilities V1.Ø
for RSTS/E V7.Ø
FAL

RESOLUTION OF BLOCK NUMBER PROBLEM BETWEEN RSTS/E-RT11 - MANDATORY FAL PATCH

PROBLEM:

As described in article Seq 31.11.1 M, published in these Release Notes, FAL on RSTS/E and RT11 differ in the number of the first block in a file. This situation has changed since publication of that article, and RSTS/E and RT11 now number the first block of a file in the same manner.

SOLUTION:

The patching procedure detailed below resolves the above problem.

NOTE

The mandatory NFT program patch described in article Seq 31.1Ø.4 M must be installed along with this patch.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required files to be patched are located on the public disk structure. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "A" or later.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $PIP.SAV<cr>
*FALØØ3.MAC=KB:<cr>
<tab>.TITLE<tab>FAL<tab>FILE ACCESS LISTENER<cr>
<tab>.IDENT<tab>"Ø6C.41"<cr>
<tab>.PSECT<tab>FAL<cr>
$$BASE = .<cr>
.=<tab>$$BASE+1412<cr>
<tab>ADD<tab>#1,46(R1)<cr>
<tab>ADC<tab>5Ø(R1)<cr>
.=<tab>$$BASE+16Ø6<cr>
<tab>ADD<tab>#1,46(RØ)<cr>
<tab>ADC<tab>5Ø(RØ)<cr>
.=<tab>$$BASE<cr>
.END<cr>
^Z
*^Z

Ready
```

```
RUN $MAC.TSK<cr>
MAC>FALØØ3=FALØØ3<cr>
MAC>^Z

Ready

RUN $LBR.TSK<cr>
LBR>FAL.OBJ=LB:NETSUB.OLB/EX:FAL<cr>
LBR>^Z

Ready

RUN $PAT.TSK<cr>
PAT>FALNEW.OBJ=FAL.OBJ/CS:154140,FALØØ3.OBJ/CS:ØØ7Ø33<cr>
PAT>^Z

Ready

RUN $LBR.TSK<cr>
LBR>LB:NETSUB.OLB/RP=FALNEW.OBJ/-EP<cr>

MODULE "FAL    " REPLACED
LBR>^Z

Ready

RUN $UTILTY<cr>
<UTILTY's header line>
#REMOVE LOGICAL NET<cr>                    <NOTE: this may generate an error>
#ADD LOGICAL LB: NET<cr>
#REMOVE LOGICAL RMS<cr>                    <NOTE: this may generate an error>
#ADD LOGICAL LB: RMS<cr>
#^Z

Ready

RUN $TKB.TSK<cr>
TKB>FAL/PI,FAL=NET:FAL.ODL/MP<cr>
ENTER OPTIONS:
TKB>STACK=1Ø24<cr>
TKB>HISEG=RMS11<cr>
TKB>//<cr>

Ready

RUN $PIP.SAV<cr>
*SY:$FAL.TSK<232>=FAL.TSK<cr>
*FALØØ3.OBJ,FALØØ3.MAC,FAL.OBJ,FALNEW.OBJ/DE<cr>
*^Z

Ready
```

RPG II V8.Ø2
for RSTS/E V7.Ø
Package Notes

INSTALLING RPG II V8.Ø2 ON RSTS/E V7.Ø

To install RPG II V8.Ø2 on RSTS/E V7.Ø, you must use the RPGGEN.CTL and RPGNB2.CTL command files on Patch Kit "A" of the RSTS/E V7.Ø distribution kit instead of those on the RPG distribution kit.

Various error messages will appear during the compilation of RPGDMP. These problems are corrected by a patch file in the patch kit.

RPG II V8.02
for RSTS/E V7
Package Notes

Seq 32.1.1 N

1 of 1

RPG PATCH FILES IN RSTS/E PATCH KIT "B" (JE)

The RSTS/E VØ6C Patch Kit "B" includes three RPG files, which you should copy into the system library account [1,2]:

```
RPGPAT.CMD  (OTS patch file)
RPGCMP.CMD  (Compiler taskbuilding file)
RPGOTS.ODL  (OTS overlay descriptor file).
```

The best way to transfer the files might be

```
PIP $<4Ø>=dev:$RPG???.*
```

Afterwards, to make use of the OTS patches, re-taskbuild the RPG programs. To make use of the Compiler patches, re-taskbuild the Compiler, after copying the $RPGCMP.CMD file into the account in which you are building the Compiler. Subsequent patches for the Compiler or the OTS can be added directly to these files.

RPG II V8.02
for RSTS/E V7

Seq 32.1.2 O

1 of 1

INDEX SEQUENTIAL FILE ERROR (SPR 11-188ØØ YL)

Index sequential file with more than 5 keys will result in RMS error -1168.

RPG run time system temporarily limit the maximum number of keys of an index sequential file as 5. If you have more than 5 keys, then you can add the following parameter to RPG.CMD file before you task-build your RPG program.

GBLDEF = D.IDX:M Where M is the octal number of keys defined in an indexed file.

For Example: Suppose your index sequential file has 7 keys, then add

GBLDEF = D.IDX: 7 to RPG.CMD file, then task build your program. Ignore D.IDX multiply defined error message during TKB.

RPG II V8.Ø2
for RSTS/E V7
COMPILER

Seq 32.2.1 R

1 of 1

COMPILER RESTRICTION (YL)

The RPG compiler does not handle CCL and indirect command properly.

When using CCL command, the RPG compiler does not give control back to monitor after executing the command.

Example:

```
RPG Δ command
RPG >
```

When using indirect command file, the RPG compiler only executes the first command in the indirect command file.

Example:

```
RPG >@ indirect command file
RPG >
```

If the indirect command file contains more than one command, only the first one will be executed.

RPG II V8.02
for RSTS/E V7
Compiler V8.02

MOVEL AND MOVE ADDRESSING FAILURES - MANDATORY COMPILER PATCH (CJ)

PROBLEM:

The move operations into arrays give results which contain characters from the previous array operation.

For MOVEL and MOVE, the array element is not being unloaded to the hold area before being executed; therefore, the shorter source field is being moved into an un-initialized hold area, then stored in the array element.

SOLUTION:

The patch detailed below will add some further testing for MOVEL indexing modes and will produce the proper OTS calls to unload the array before the MOVE or MOVEL operations are performed.

NOTE

This patch must be applied to the (unpatched) RPGCMP.CMD file that is included in the RPG II V8.02 distribution kit.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG Compiler task build command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGCMP.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that all other necessary files (RPGCMP.ODL and RPGCMP.OLB) are located in that account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGCMP.CMD=RPGCMP.CMD<cr>
#[logfile=]<cr>
*H/RPG/V<cr>
$RPG/FU/CP,RPGCMP=RPGCMP/SS/MP<cr>
```

RPG II V8.02
for RSTS/E V7
Compiler V8.02

Seq 32.2.2 M

2 of 3

```
*0AC<cr>
;                        BUILD RPG II V8.02 COMPILER<cr>
<cr>
<esc>*V<cr>
RPG/FU/CP,RPGCMP=RPGCMP/SS/MP<cr>
*AI<cr>
<cr>
<esc>*H/20K/V<cr>
;<tab><tab><tab>34000 OCTAL BYTES GIVES A 20K COMPILER;<cr>
*-3C/16K/V<cr>
;<tab><tab><tab>34000 OCTAL BYTES GIVES A 16K COMPILER;<cr>
*H/= OF/V<cr>
;<tab><tab><tab>= OF LINES/PAGE FOR LISTINGS<cr>
*-4C/# OF/V<cr>
;<tab><tab><tab># OF LINES/PAGE FOR LISTINGS<cr>
*H/INSERT PATCHES HERE/V<cr>
;INSERT PATCHES HERE -- V8.03<cr>
*G/V8.03/-C/2/V<cr>
;INSERT PATCHES HERE -- V8.02<cr>
*AL<cr>
;<cr>
*AI<cr>
; V8.02A -- MOVEL INTO ARRAY<cr>
;<cr>
GBLPAT=CLC:C.CLC+3314:1423<cr>
GBLPAT=CLC:C.CLC+3504:62434:101436:42330:174223:134224:4156<cr>
GBLPAT=CLC:C.CLC+3520:17435:5565:17434:3017<cr>
GBLPAT=CLC:C.CLC+6474:57514:106775:144172:6406:1436<cr>
;<cr>
GBLPAT=C.STKS:C.EDLV:101<cr>
<esc>*V<cr>
/<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPG Compiler and re-enter it into the system library, type the following RSTS/E commands.

```
RUN $TKB.TSK<cr>
TKB>@RPGCMP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPG.TSK=RPG.TSK<cr>
*=$RPG.TSK<232>/RE<cr>
*^Z

Ready
```

RPG II V8.02
for RSTS/E V7
Compiler V8.02

Seq 32.2.2 M

3 of 3

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. The command file and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
Compiler V8.02A

Seq 32.2.3 M

1 of 2

NUMBER OF FILES LIMIT INCORRECT - MANDATORY COMPILER PATCH (SPR 11-18151 YL)

PROBLEM:

When the RPG Compiler builds the .CMD file for the Task Builder, it enters the number for the 'UNITS=' option as an octal number. TKB expects a decimal number. This results in limiting an RPG program to 10 files in the RSTS/E environment.

SOLUTION:

The patch detailed below will correct the number of units.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG Compiler task build command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGCMP.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that all other necessary files (RPGCMP.ODL and RPGCMP.OLB) are located in that account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGCMP.CMD=RPGCMP.CMD<cr>
#[logfile=]<cr>
*H/V8.02A/V<cr>
; V8.02A -- MOVEL INTO ARRAY<cr>
*5AL<cr>
GBLPAT=CLC:C.CLC+6474:57514:106775:144172:6406:1436<cr>
*AI<cr>
;<cr>
; V8.02B -- NUMBER OF DEVICE UNITS<cr>
;<cr>
GBLPAT=EXIT:C.CLSE+414:121322<cr>
<esc>*V<cr>
;<cr>
```

RPG II V8.02
for RSTS/E V7
Compiler V8.02A

Seq 32.2.3 M

2 of 2

```
*G/C.EDLV:/V<cr>
GBLPAT=C.STKS:C.EDLV:101<cr>
*2JC/2/V<cr>
GBLPAT=C.STKS:C.EDLV:102<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPG Compiler and re-enter it into the system library, type the following RSTS/E commands.

```
RUN $TKB.TSK<cr>
TKB>@RPGCMP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPG.TSK=RPG.TSK<cr>
*=$RPG.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. The command file and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
Compiler V8.02B

Seq 32.2.4 M

OUTPUT RECORD AND/OR FAILURE - MANDATORY COMPILER PATCH (SPR 11-18151 YL)

PROBLEM:

Complex output records using AND/OR extensions for grouping indicators, where AND lines follow OR lines, are being processed as OR.

SOLUTION:

The patch detailed below will modify the output phase at task build time to correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG Compiler task build command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGCMP.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that all other necessary files (RPGCMP.ODL and RPGCMP.OLB) are located in that account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGCMP.CMD=RPGCMP.CMD<cr>
#[logfile=]<cr>
*H/V8.02B/V<cr>
; V8.02B -- NUMBER OF DEVICE UNITS<cr>
*2AV<cr>
GBLPAT=EXIT:C.CLSE+414:121322<cr>
*AI<cr>
;<cr>
; V8.02C -- OUTPUT AND/OR COMPLEX RECORDS<cr>
;<cr>
GBLPAT=OUT:C.OUT+1756:465<cr>
<esc>*H/C.EDLV:/V<cr>
GBLPAT=C.STKS:C.EDLV:102<cr>
*G/102/-C/3/V<cr>
GBLPAT=C.STKS:C.EDLV:103<cr>
*EX<cr>
```

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPG Compiler and re-enter it into the system library, type the following RSTS/E commands.

```
RUN $TKB.TSK<cr>
TKB>@RPGCMP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPG.TSK=RPG.TSK<cr>
*=$RPG.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. The command file and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
Compiler V8.02C

Seq 32.2.5 M

1 of 1

NUMBER OF DEVICE UNITS - MANDATORY COMPILER PATCH (11-20543 YL)

PROBLEM:

Compiler patch 8.02B in Article Sequence Number 32.2.3 fails to take into account the fact that in some RSTS/E environments the system subroutine CBTA gets relocated. This invalidates the patch given in the previous article.

SOLUTION:

The patch detailed below will remove the previous patch (V8.02B). The patch detailed in the following article, Sequence 32.2.6, will correct the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG Compiler task build command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGCMP.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

2. The command file for this patch appears in patch kit version "E" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGCMP.CMD=RPGCMP.CMD<cr>
#[logfile=]<cr>
*H/V8.02B/V<cr>
; V8.02B -- NUMBER OF DEVICE UNITS<cr>
*2AV<cr>
GBLPAT=EXIT:C.CLSE+414:121322<cr>
*KI<cr>
; PATCH 8.02B REMOVED<cr>
<esc>*AV<cr>
; V8.02C -- OUTPUT AND/OR COMPLEX RECORDS<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. Do NOT re-build the RPG Compiler using the corrected command file. Instead, now install the patch given in the following article, Sequence 32.2.6

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

RPG II V8.02
for RSTS/E V7
Compiler V8.02C

Seq 32.2.6 M

1 of 2

NUMBER OF DEVICE UNITS - MANDATORY COMPILER PATCH (11-20543 YL)

PROBLEM:

When the RPG Compiler builds the .CMD file for the Task Builder, it enters the number for the 'UNITS=' option as an octal number. TKB expects a decimal number. This results in limiting an RPG program to 10 files in the RSTS/E environment.

SOLUTION:

The patch detailed below will correct the number of units.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that all of the necessary RPG Compiler files (RPGCMP.CMD, RPGCMP.ODL and RPGCMP.OLB) are located on the public disk structure in that account. If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "E" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: EXIT.COR

```
        .TITLE  EXIT
        .IDENT  /V8.01/
.=.+412
        JSR     PC,$CBDMG
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>EXIT.PAT,EXIT.LIS=EXIT.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>EXIT.OLD=RPGCMP/EX:EXIT
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>EXIT=EXIT.OLD/CS:44060,EXIT.PAT/CS:4673
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>RPGCMP/RP=EXIT
LBR>^Z                                          (CTRL/Z to exit)
```

6. Re-build the RPG Compiler and re-enter it into the system library as follows:

```
RUN $TKB.TSK<cr>
TKB>@RPGCMP<cr>
TKB>^Z                                          (CTRL/Z to exit)

Ready

RUN $PIP.SAV<cr>
*$RPG.TSK=RPG.TSK<cr>
*=$RPG.TSK<232>/RE<cr>
*^Z                                             (CTRL/Z to exit)

Ready
```

7. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

8. The command file and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
OTS V8.02

Seq 32.3.1 M

SEVERAL OTS PROBLEMS - MANDATORY OTS PATCH (JE)

PROBLEM:

This article encompasses several problems with the RPG OTS.

a. The OTS will fail for programs which access Indexed files by Addrout, aborting with "?Unibus timeout" or "RMS Error -1168" or "RMS Error -484". The same problem exists when an RMS Indexed file is accessed by RPG as a sequential file.

b. If the last (right-most) field in an output record is Packed, in some cases the last packed digit will look like a blank or terminator and be trimmed off by the OTS, causing a short record (reported as "RMS Error -1568" which means Bad Record Size).

c. If a fatal error occurs before all files have been opened (and any of these have been reassigned), the program may trap while closing and terminating after reporting the error. The trap may be "?Memory management violation" or "?Unibus timeout".

d. If a sequential or relative file is being processed by Addrout, the OTS instead will do simple sequential input.

SOLUTION:

The patches detailed below correct the problems listed.

a. This patch corrects the problem by causing the OTS to treat the Indexed file consistently as Indexed, for buffering and other setup.

b. This patch corrects the problem by disabling line-trimming for non-Carriage Control devices.

c. This patch corrects the problem.

d. This patch corrects the problem.

NOTE

These patches encompass, and supersede, the patches that were included in the Release Notes distributed with RPG II V8.02. The patches have been reformatted as they will appear for future corrections.

The patches found here must be applied to the (unpatched) RPGPAT.CMD file that is included in the RPG II V8.02 distribution kit.

RPG II V8.02 Seq 32.3.1 M
for RSTS/E V7
OTS V8.02 2 of 3

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/DEFINE Q.ZONU/V<cr>
; DEFINE Q.ZONU AS 0 FOR OVERPUNCHED NUMERIC, 1 FOR ZONED NUMERIC:<cr>
*2AI<cr>
;<cr>
; EXTEND PATCH SPACE<cr>
EXTSCT=$$RPG0:176<cr>
; V8.02A -- INDEXED ADDROUT PROCESSING<cr>
GBLPAT=XXOPN:.OPEN+754:400<cr>
GBLPAT=XXOPN:.OPEN+1114:400<cr>
GBLPAT=XXOPN:.OPEN+1246:4737:2000:4<cr>
GBLPAT=XXOPN:.OPEN+1772:4737:2000:34<cr>
GBLPAT=RMSOV:M.PAT+10:122765:176440:6:1431:122765:40:25<cr>
GBLPAT=RMSOV:M.PAT+26:1022:52762:100000:2:416:132762<cr>
GBLPAT=RMSOV:M.PAT+42:100000:2:11603:12763:166703:50<cr>
GBLPAT=RMSOV:M.PAT+56:132762:100000:2:1003:12763:401<cr>
GBLPAT=RMSOV:M.PAT+72:50:62716:2:207:62716:2:264:207<cr>
;<cr>
; V8.02B -- PACKED FIELD LAST IN RECORD<cr>
GBLPAT=XXSEQ:.WRITE+126:4737:2000:106:400<cr>
GBLPAT=RMSOV:M.PAT+112:32762:40000:2:1365:16265:40:30<cr>
GBLPAT=RMSOV:M.PAT+130:12616:62716:24:207<cr>
;<cr>
; V8.02C -- CLOSE FILES AFTER FATAL ERROR<cr>
GBLPAT=XXCLS:.CLOSE+52:4737:2000:134<cr>
GBLPAT=RMSOV:M.PAT+140:116503:1641:70327:16:60503:62703:2450:160003<cr>
GBLPAT=RMSOV:M.PAT+160:103404:16065:2:4:741:5726:207<cr>
;<cr>
; V8.02D -- NONINDEXED ADDROUT PROCESSING<cr>
GBLPAT=RMSOV:R.INRA+16:52762:100000:2:240<cr>
<esc>*EX<cr>
```

RPG II V8.02
for RSTS/E V7
OTS V8.02

Seq 32.3.1 M

3 of 3

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02

Seq 32.3.2 F

HALT MESSAGE ERROR SEVERITY - OTS PATCH (JE)

PROBLEM:

Halt messages do not cause batch streams to abort.

SOLUTION:

The optional patch detailed below will cause halt messages to be printed preceded by a question mark, thereby causing a batch stream to abort if it has not been set to ignore Fatal errors. With this patch, for example, H0 on at the start of the cycle would result in the message "?H0 IS ON".

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/DEFINE Q.ZONU/V<cr>
; DEFINE Q.ZONU AS 0 FOR OVERPUNCHED NUMERIC, 1 FOR ZONED NUMERIC:<cr>
*2AI<cr>
;<cr>
; V8.02 -- HALT MESSAGE ERROR SEVERITY<cr>
GBLPAT=M.ABRT:M.ABRT+332:37415<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

RPG II V8.02
for RSTS/E V7
OTS V8.02

Seq 32.3.2 F

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02D

Seq 32.3.3 M

OVERLAY STRUCTURE DEGRADES PERFORMANCE - MANDATORY OTS PATCH (JE)

PROBLEM:

The overlay structure for the OTS I/O modules causes unnecessary overlaying from disk during the RPG cycle. This severely degrades execution speed.

SOLUTION:

The patches to the RPG OTS patch command file and overlay description file that are detailed below correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS task builder files are located on the public disk structure. In the patching procedure, we will, therefore, refer to those files by their simplest forms: RPGPAT.CMD and RPGOTS.ODL. If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command files for this patch appear in patch kit version "C" or later. If you do not have that distribution, you can produce command files by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/V8.02C/V<cr>
; V8.02C -- CLOSE FILES AFTER FATAL ERROR<cr>
*G/XXCLS/V<cr>
GBLPAT=XXCLS:.CLOSE+52:4737:2000:134<cr>
*-5C/RMSOV/V<cr>
GBLPAT=RMSOV:.CLOSE+52:4737:2000:134<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
```

RPG II V8.02
for RSTS/E V7
OTS V8.02D

Seq 32.3.3 M

2 of 2

```
File to patch - RPGOTS.ODL=RPGOTS.ODL<cr>
#[logfile=]<cr>
*H/D:/V<cr>
D:<tab>.FCTR<tab>RTSOV2-*(BB1,BB2,BB3,BB4)<cr>
*G/BB4/-4DV<cr>
D:<tab>.FCTR<tab>RTSOV2-*(BB1,BB2,BB3)<cr>
*G/SYS:/V<cr>
SYS:<tab>.FCTR<tab>SYS1-SYS2-SYS3<cr>
*G/SYS3/I/-BB4/V<cr>
SYS:<tab>.FCTR<tab>SYS1-SYS2-SYS3-BB4<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file and the overlay description file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*$RPGOTS.ODL<40>=RPGOTS.ODL<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new versions of the command and overlay descriptor files.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02D

Seq 32.3.4 M

OTS ERROR REPORTING PROBLEMS - MANDATORY OTS PATCH (JE)

PROBLEM:

There are two problems with error reporting:

e. Certain RPG errors (e.g., Invalid Packed Digit) may be non-file-specific. For these, the OTS gives a message which lists information for all of the RPG files. If some of these have not been opened when such an error occurs, the program may trap to the monitor (e.g., with "?Unibus timeout" error) when the OTS tries to access the filespec of an unopened file.

f. At least some of the monitor-code RMS errors (those which have non-specific RMS codes but more detailed associated monitor codes) should be retry-able, as enabled by RPGASN's /QU switch. For example, if the line printer goes off-line, this may result in RMS code -1776 (Write Error) and RSTS/E code 14 (Device hung or write-locked).

SOLUTION:

The patches detailed below correct the problems listed.

e. This patch makes sure the files listed in the message are opened ones.

f. This patch includes these monitor-code errors as retry-able.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:176<cr>
*G/176/-3C/244/V<cr>
EXTSCT=$$RPG0:244<cr>
```

RPG II V8.02
for RSTS/E V7
OTS V8.02D

Seq 32.3.4 M

2 of 2

```
*H/V8.02D/V<cr>
; V8.02D -- NONINDEXED ADDROUT PROCESSING<cr>
*AV<cr>
GBLPAT=RMSOV:R.INRA+16:52762:100000:2:240<cr>
*AI<cr>
;<cr>
; V8.02E -- TRAP ON RPG ERROR<cr>
GBLPAT=XXRPG:$ERRPG+314:4737:2000:172<cr>
GBLPAT=RMSOV:M.PAT+176:11602:16202:16:116205:177535:70527:16:60205<cr>
GBLPAT=RMSOV:M.PAT+216:62705:344:160105:103404:116162:7:4:717<cr>
GBLPAT=RMSOV:M.PAT+236:62716:177574:207<cr>
;<cr>
; V8.02F -- RETRY ON MONITOR ERRORS<cr>
GBLPAT=XXRMS:$ERRMS+732:25:16702:177642<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02

Seq 32.3.5 F

1 of 2

PAGING FOR NON-STANDARD LENGTH FORMS - OTS PATCH (JE)

PROBLEM:

For standard 66-line forms, the OTS pages to top-of-form using the form-feed (FF) character. For other lengths, as set in the Line Counter specification, the OTS uses line-feeds to simulate paging. This assumes a printer whose hardware form-length can not be reset.

However, this increases output time and, if the file is queued to the RSTS/E spooler, prevents restarting in the middle of the file after an interruption (the spooler relies on form-feeds to delimit pages).

SOLUTION:

The optional patch detailed below will cause all paging to be done with form-feed characters, which will solve the problem if your line printer has an adjustable form-length.

NOTE

If your line printer uses a carriage control tape for form-feeding, it will have to be changed to reflect the appropriate form length.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/DEFINE Q.ZONU/V<cr>
; DEFINE Q.ZONU AS 0 FOR OVERPUNCHED NUMERIC, 1 FOR ZONED NUMERIC:<cr>
```

```
*2AI<cr>
;<cr>
; ENABLE THIS LINE FOR FORM-FEED (FF) PAGING FOR ALL FORM LENGTHS:<cr>
GBLPAT=RMSOV:R.FADV+116:412<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02F

Seq 32.3.6 M

LINE COUNTING WITH OVERPRINT - MANDATORY OTS PATCH

PROBLEM:

When overprinting lines to the Printer (Space After = 0 in column 18 of the Output specification), the OTS includes overprinted lines in the line count for the page, causing premature forms overflow.

SOLUTION:

The patch detailed below corrects this error.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:244<cr>
*G/244/-2C/66/V<cr>
EXTSCT=$$RPG0:266<cr>
*H/V8.02F/V<cr>
; V8.02F -- RETRY ON MONITOR ERRORS<cr>
*AV<cr>
GBLPAT=XXRMS:$ERRMS+732:25:16702:177642<cr>
*AI<cr>
;<cr>
; V8.02G -- LINE-COUNTING WITH OVERPRINT<cr>
GBLPAT=RMSOV:R.RELP+6:4737:2000:240<cr>
GBLPAT=RMSOV:M.PAT+244:16302:270:5362:102:5362:10:62716:4<cr>
GBLPAT=RMSOV:M.PAT+264:207<cr>
<esc>*EX<cr>
```

RPG II V8.02
for RSTS/E V7
OTS V8.02F

Seq 32.3.6 M

2 of 2

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02G

PLUS-ZERO OVERPUNCH PROBLEM - MANDATORY OTS PATCH

PROBLEM:

Numeric input which terminates with an overpunch 12-0 combination, meaning plus-zero, is treated as an 11-0 or negative value instead.

SOLUTION:

The patch detailed below changes a test in the numeric conversion routine to correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/V8.02G/V<cr>
; V8.02G -- LINE-COUNTING WITH OVERPRINT<cr>
*3AV<cr>
GBLPAT=RMSOV:M.PAT+264:207<cr>
*AI<cr>
;<cr>
; V8.02H -- PLUS-ZERO OVERPUNCH<cr>
GBLPAT=RMSOV:R.NUMC+156:121127:172<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

RPG II V8.02
for RSTS/E V7
OTS V8.02G

Seq 32.3.7 M

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02H

Seq 32.3.8 M

1 of 2

INDICATOR HANDLING PROBLEMS - MANDATORY OTS PATCH

PROBLEM:

There are three problems with the indicator handling:

i. When overflow occurs during total time, the overflow is performed twice.

j. If an external indicator is used on an input primary file and the program uses matching record logic on that file, the first record of the secondary file is not processed if the external indicator is off.

k. The OTS is unable to set overflow indicators on or off at the calculation phase for total time output conditioning. The internal overflow switches are resetting the program indicators set during the total time calculation.

SOLUTION:

These problems are all solved by the patches detailed below.

i. This patch modifies overflow switch servicing in the release print record routine.

j. This patch corrects the problem.

k. This patch modifies the program overflow indicator servicing.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
```

```
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:266<cr>
*G/266/-3C/402/V<cr>
EXTSCT=$$RPG0:402<cr>
*H/V8.02H/V<cr>
; V8.02H -- PLUS-ZERO OVERPUNCH<cr>
*AV<cr>
GBLPAT=RMSOV:R.NUMC+156:121127:172<cr>
*AI<cr>
;<cr>
; V8.02I -- OVERFLOW INDICATOR PROBLEMS<cr>
GBLPAT=RMSOV:R.RELP+76:4767:44<cr>
GBLPAT=RMSOV:R.RELP+136:4737:2000:262:751<cr>
GBLPAT=RMSOV:R.RELP+146:4737:2000:274:16301:276:207<cr>
GBLPAT=RMSOV:M.PAT+266:4767:24:150063:310:404<cr>
GBLPAT=RMSOV:M.PAT+300:4767:12:140063:310:62716:2:207<cr>
GBLPAT=RMSOV:M.PAT+316:16201:6:162701:30:12700:400<cr>
GBLPAT=RMSOV:M.PAT+332:6200:5301:2375:207<cr>
;<cr>
; V8.02J -- EXTERNAL INDICATOR ON SECONDARY FILE<cr>
GBLPAT=M.INIT:M.INIT+124:240:240<cr>
;<cr>
; V8.02K -- OVERFLOW INDICATOR AT TOTAL TIME<cr>
GBLPAT=RMSOV:M.STRT+1666:4737:2000:336<cr>
GBLPAT=RMSOV:M.STRT+1676:240<cr>
GBLPAT=RMSOV:M.PAT+342:105766:2:100003:112721:177777:407:162716:362<cr>
GBLPAT=RMSOV:M.PAT+362:20516:1401:105021:62716:362:62716:2:207<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02K

Seq 32.3.9 M

1 of 2

RELATIVE FILE PROBLEMS - MANDATORY OTS PATCH (SPR 11-18290,-18292 JE)

PROBLEM:

There are two problems with relative files:

1. The /RE[LATIVE] switch (which causes a new file to be created with RMS-11 Relative file organization) is ignored by the OTS. Instead, a Sequential file is created.

m. Attempting sequential update of a file whose organization is RMS-11 Relative results in RMS Error -944 (Invalid Key).

SOLUTION:

The patches detailed below correct these problems.

1. This patch enables the /RE switch.

m. This patch corrects the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:402<cr>
*G/402/-2C/32/V<cr>
EXTSCT=$$RPG0:432<cr>
*H/V8.02K/V<cr>
; V8.02K -- OVERFLOW INDICATOR AT TOTAL TIME<cr>
*4AV<cr>
GBLPAT=RMSOV:M.PAT+362:20516:1401:105021:62716:362:62716:2:207<cr>
```

```
*AI<cr>
;<cr>
; V8.02L -- CREATING RELATIVE FILES<cr>
GBLPAT=XXOPN:.OPEN+1464:402<cr>
;<cr>
; V8.02M -- SEQUENTIAL UPDATE OF RELATIVE FILES<cr>
GBLPAT=XXSEQ:.RECRD+164:4737:2000:376<cr>
GBLPAT=RMSOV:M.PAT+402:16264:104:16:1005:5762:106:1002<cr>
GBLPAT=RMSOV:M.PAT+420:5262:106:62716:2:207<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02M

Seq 32.3.10 M

MOVE ARRAY PROBLEM - MANDATORY OTS PATCH

PROBLEM:

When Move Array (MOVEA) is operating on a field with a string greater than 127 characters, an RPG Error 21 is generated.

SOLUTION:

The patch detailed below corrects this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/V8.02M/V<cr>
; V8.02M -- SEQUENTIAL UPDATE OF RELATIVE FILES<cr>
*3AV<cr>
GBLPAT=RMSOV:M.PAT+420:5262:106:62716:2:207<cr>
*AI<cr>
;<cr>
; V8.02N -- MOVEA INTO FIELDS LONGER THAN 127 CHARACTERS<cr>
GBLPAT=RMSOV:R.MOVA+66:151100<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

RPG II V8.02
for RSTS/E V7
OTS V8.02M

Seq 32.3.10 M

2 of 2

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02N

Seq 32.3.11 M

EXTRA LINE STARTS PRINTR FILES - MANDATORY OTS PATCH (SPR 11-18422 JE)

PROBLEM:

When a PRINTR file is generated by an RPG program, the output begins with a line feed character. This causes the first page to have an extra line and thus to have different alignment from other pages, causing problems with preprinted forms.

SOLUTION:

The patch detailed below corrects this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/V8.02N/V<cr>
; V8.02N -- MOVEA INTO FIELDS LONGER THAN 127 CHARACTERS<cr>
*AV<cr>
GBLPAT=RMSOV:R.MOVA+66:151100<cr>
*AI<cr>
;<cr>
; V8.020 -- EXTRA LINE STARTS PRINTR FILES<cr>
GBLPAT=XXRMS:$ERRMS+34:402<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

RPG II V8.02
for RSTS/E V7
OTS V8.02N

Seq 32.3.11 M

2 of 2

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02O

Seq 32.3.12 M

1 of 2

MULTI-USER FILE ACCESS PROBLEM - MANDATORY OTS PATCH (SPR 11-18627 YL)

PROBLEM:

In some cases, assigning a file (using RPGASN) with the /MU switch (Multi-User) causes the program to abort with RMS Error -480 (Dynamic Memory Exhausted).

SOLUTION:

The patch detailed below corrects this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/V8.02O/V<cr>
; V8.02O -- EXTRA LINE STARTS PRINTR FILES<cr>
*AV<cr>
GBLPAT=XXRMS:$ERRMS+34:402<cr>
*AI<cr>
;<cr>
; V8.02P -- /MU SWITCH<cr>
GBLPAT=XXOPN:.OPEN+2244:240<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

RPG II V8.02
for RSTS/E V7
OTS V8.020

Seq 32.3.12 M

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02P

Seq 32.3.13 M

MULTIPLE PRE-EXECUTION TABLES - MANDATORY OTS PATCH (SPR 11-18781 JE)

PROBLEM:

When multiple (more than 2) pre-execution time tables/arrays are used in a program, it executes correctly but goes into an endless loop at program termination.

SOLUTION:

The patch detailed below corrects this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:432<cr>
*G/432/-2C/52/V<cr>
EXTSCT=$$RPG0:452<cr>
*H/V8.02P/V<cr>
; V8.02P -- /MU SWITCH<cr>
*AV<cr>
GBLPAT=XXOPN:.OPEN+2244:240<cr>
*AI<cr>
;<cr>
; V8.02Q -- MULTIPLE PRE-EXECUTION TABLES<cr>
GBLPAT=RMSOV:.CLOSE+72:4737:2000:426<cr>
GBLPAT=RMSOV:M.PAT+432:16065:0:4:5062:50:62716:2:207<cr>
<esc>*EX<cr>
```

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02Q

Seq 32.3.14 M

1 of 2

CLOSING RMS FILES ON RSX SYSTEMS - MANDATORY OTS PATCH (YL)

PROBLEM:

Closing RMS files on RSX systems (RSX-11M, IAS, VAX/VMS Compatability Mode) requires clearing the XAB field of the FAB before issuing a $CLOSE. If the XAB field is not cleared, RMS will validate protection by scanning the XAB chain, which will sometimes cause an odd address violation during file closing on RSX systems. RMS on RSTS/E does not validate protection during file closing; therefore, this patch is not necessary at the present time, but it is mandatory in case of a future change to RMS.

SOLUTION:

The patch detailed below corrects this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "E" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:452<cr>
*G/452/-C/6/V<cr>
EXTSCT=$$RPG0:456<cr>
*H/V8.02Q/V<cr>
; V8.02Q -- MULTIPLE PRE-EXECUTION TABLES<cr>
*2AV<cr>
GBLPAT=RMSOV:M.PAT+432:16065:0:4:5062:50:62716:2:207<cr>
*AI<cr>
;<cr>
; V8.02R -- CLOSE RMS FILES ON RSX SYSTEMS<cr>
GBLPAT=RMSOV:M.PAT+444:5065:30:62716:2:207<cr>
<esc>*EX<cr>
```

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02R

Seq 32.3.15 M

SENSING OVERFLOW WHEN TOTAL TIME OUTPUT ONLY - MANDATORY OTS PATCH (YL)

PROBLEM:

RPG resets all internal overflow bit switches at total time rather than being selective about it.

SOLUTION:

The patch detailed below deletes this reset scheme and relocates the internal overflow indicator reset to the forms advance routine. Forms advance resets the internal overflow switch for the file when the line count is reset to one.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "E" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:456<cr>
*G/456/-3C/506/V<cr>
EXTSCT=$$RPG0:506<cr>
*H/V8.02R/V<cr>
; V8.02R -- CLOSE RMS FILES ON RSX SYSTEMS<cr>
*AV<cr>
GBLPAT=RMSOV:M.PAT+444:5065:30:62716:2:207<cr>
*AI<cr>
;<cr>
; V8.02S -- OVERFLOW INDICATOR RESET FOR TOTAL TIME OUTPUT ONLY<cr>
GBLPAT=RMSOV:M.STRT+1330:240:240<cr>
GBLPAT=RMSOV:R.FADV+144:4737:2000:452<cr>
GBLPAT=RMSOV:M.PAT+456:12762:1:10:62716:126:4576:0:142663<cr>
GBLPAT=RMSOV:M.PAT+476:310:162716:124:207<cr>
<esc>*EX<cr>
```

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02S

Seq 32.3.16 M

THE "MR" INDICATOR IS IMPROPERLY ON - MANDATORY OTS PATCH (YL)

PROBLEM:

In an RPG program with more than one secondary file and matching fields, the "MR" indicator is turned on whenever the matching fields of the secondary files are matched even if no matched matching field is present in the primary file.

SOLUTION:

The patch detailed below corrects this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/EXTSCT/V<cr>
EXTSCT=$$RPG0:506<cr>
*G/506/-2C/60/V<cr>
EXTSCT=$$RPG0:560<cr>
*H/V8.02S/V<cr>
; V8.02S -- OVERFLOW INDICATOR RESET FOR TOTAL TIME OUTPUT ONLY<cr>
*AV<cr>
GBLPAT=RMSOV:M.STRT+1330:240:240<cr>
*4AI<cr>
;<cr>
; V8.02T -- MATCHING RECORD<cr>
GBLPAT=RMSOV:M.STRT+652:4737:2000:504<cr>
GBLPAT=RMSOV:M.STRT+752:4737:2000:526:240<cr>
GBLPAT=RMSOV:M.STRT+772:4737:2000:544<cr>
GBLPAT=RMSOV:M.PAT+506:0:105767:177772:1403:112763:177777:311:62716<cr>
GBLPAT=RMSOV:M.PAT+526:2:207:105063:311:5063:240:105067:177740<cr>
GBLPAT=RMSOV:M.PAT+546:766:112767:177777:177730:757<cr>
<esc>*EX<cr>
```

RPG II V8.02
for RSTS/E V7
OTS V8.02S

Seq 32.3.16 M

2 of 2

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the corrections just made. It is not necessary to re-compile.

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.17 M

UPDATE AFTER ADDING NEW RECORDS TO INDEXED FILE - MANDATORY OTS PATCH (YL)

PROBLEM:

During multi-file processing, RMS error 384 (No Current Record) occurs when an indexed file is updated after a new record has been added to that file.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library files (RPGLIB.OLB and RPGCOM,OLB) are located on the public disk structure in the system library account ($). If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "F" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXRDM.COR

```
            .TITLE  XXRDM -- RPG RANDOM FILE I/O
            .IDENT  /V8.01/ ;29-JAN-79 YL
            .MCALL  RABOF$,RAB$BT
            RABOF$  RMS$L
            RAB$BT  DFIN$L
            CB=%2
            F.KYPS=112
            F.KEYL=114
$$BASE=.
.           =$$BASE+512
            JSR     PC,$$BASE+772
.           =$$BASE+772
            BISB    #RB$KEY,O$RAC(R5)       ;KEYED ACCESS
            MOVB    F.KEYL(CB),O$KSZ(R5)    ;KEY-LENGTH
            MOV     F.KYPS(CB),O$KBF(R5)    ;KEY-BUFFER
            ADD     O$RBF(R5),O$KBF(R5)     ;
10$:        JSR     PC,RMSFIN               ;FIND A RECORD
            BCS     10$                     ;
            JSR     PC,RMSUPD               ;UPDATE A RECORD
            RTS     PC                      ;
            .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXRDM.PAT=LB:RMSMAC/ML,[your acct]XXRDM.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXRDM.OLD=$RPGCOM/EX:XXRDM
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXRDM=XXRDM.OLD/CS:152012,XXRDM.PAT/CS:017455
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXRDM
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.18 M

'LOKUP' AN ARRAY - MANDATORY OTS PATCH (YL)

PROBLEM:

When using the 'LOKUP' operation to search an array without an index specified, the operation does not always search the array from the first element.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library files (RPGLIB.OLB and RPGCOM.OLB) are located on the public disk structure in the system library account ($). If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "F" or later. To apply the patch manually, perform the following RSTS/E system commands.

1a. Build the following correction file using an editor and name it: RCARY.COR

```
        .TITLE  R.CARY
        .IDENT  /V8.01/ ;5-FEB-79 YL
        CR=%3
        X.WORK=312
        X.WTMP=X.WORK+100
        X.WFUN=X.WTMP+2
        ENTLGH=176000
; THIS IS A TEMPORARY FIX. PERMANENT FIX SHOULD COME FROM RPG COMPILER.
$$BASE=.
.       =$$BASE+6
        JSR     PC,$$BASE+172
.       =$$BASE+172
        BIT     #140000,R0      ;NO SEQUENCE?
        BNE     10$             ;NO
        CLR     X.WFUN(CR)      ;CLEAR STARTING INDEX ADDR
10$:    BIC     #ENTLGH,R0      ;ISOLATE ARRAY ENTRY LENGTH
        RTS     PC
        .END
```

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.18 M

1b. Build the following correction file using an editor and name it: RALKX.COR

```
            .TITLE  R.ALKX
            .IDENT  /V8.00/ ;5-FEB-79 YL
            LK=%5
    $$BASE=.
    .       =$$BASE+4
            BEQ     ALKX2           ;NO
    .       =$$BASE+30
            BEQ     ALKX2           ;
            JSR     LK,R.BNAS       ;BINARY TO ASCII CONVERSION
    ALKX2:  RTS     LK
            .END
```

2. Assemble the correction files as follows:

```
RUN $MAC.TSK
MAC>RCARY.PAT=RCARY.COR
MAC>RALKX.PAT=RALKX.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original modules as follows:

```
RUN $LBR.TSK
LBR>RCARY.OLD=L:RPGLIB/EX:R.CARY
LBR>RALKX.OLD=L:RPGLIB/EX:R.ALKX
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old modules and corrections:

```
RUN $PAT.TSK
PAT>RCARY=RCARY.OLD/CS:031531,RCARY.PAT/CS:007235
PAT>RALKX=RALKX.OLD/CS:012314,RALKX.PAT/CS:007156
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched modules in the library:

```
RUN $LBR.TSK
LBR>$RPGLIB/RP=RCARY,RALKX
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.19 M

/TA: SWITCH IN RPGASN.DAT FILE - MANDATORY OTS PATCH (YL)

PROBLEM:

If the task name used together with the /TA: switch in the RPGASN.DAT file is less than 6 characters in length and the file extension (.TSK) is explicitly specified, the run time system fails to find the data file associated with the task.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library files (RPGLIB.OLB and RPGCOM.OLB) are located on the public disk structure in the system library account ($). If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "F" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXINI.COR

```
        .TITLE  XXINI -- RPG INIT  ASSIGNMENTS
        .IDENT  /V8.02/ ;20-FEB-79 YL
$$BASE=.
.       =$$BASE+310
        JSR     PC,PATCH
.       =$$BASE+1040
PATCH:  MOV     #6,R2
        MOV     #D.TAVL,R1      ;-> /TA:TASKNAME
36$:    CMPB    (R1)+,#'.       ;SEARCH FOR
        BEQ     37$             ;FOUND
        SOB     R2,36$          ;
        BR      39$             ;NOT FOUND
37$:    DEC     R1              ;
38$:    CLRB    (R1)+           ;CLEAR .TSK
        SOB     R2,38$          ;
39$:    MOV     #6,R2           ;TASKNAME LENGTH
        RTS     PC              ;
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXINI.PAT=XXINI.COR
MAC>^Z                                          (CTRL/Z to exit)
```

RPG II V8.02 Seq 32.3.19 M
for RSTS/E V7
OTS V8.02T 2 of 2

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXINI.OLD=$RPGCOM/EX:XXINI
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXINI=XXINI.OLD/CS:053714,XXINI.PAT/CS:013164
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXINI
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.20 M

UNPACKING PACKED ARRAY AT OUTPUT TIME - MANDATORY OTS PATCH (YL)

PROBLEM:

If all or a part of an input packed array is written out as an unpacked field, the content of the array is erroneously modified and the result is unpredictable.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGLIB.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: RARIN.COR

```
        .TITLE  R.ARIN
        .IDENT  /V8.00/ ;5-MAR-79 YL
        TC=%4
        LK=%5
; *** THIS IS A TEMPORARY PATCH TO BYPASS RPG COMPILER BUG. ***
; *** NAMELY, THIS MODULE SHOULD NOT BE CALLED IF THE ARRAY ***
; *** IS A PACKED NUMERIC ARRAY.                            ***
$$BASE=.
.       =$$BASE
        JSR     PC,$$BASE+26
.       =$$BASE+26
        JSR     LK,R.ARSU       ;ARRAY RETRIEVE/UPDATE SET UP
        MOV     @-6(TC),-(SP)   ;FIRST WORD OF ACB
        BIC     #147777,(SP)    ;ISOLATE NF FIELD
        CMP     (SP)+,#20000    ;PACKED NUMERIC ARRAY?
        BNE     10$             ;NO
        TST     (SP)+           ;POP RETURN ADDR
        JMP     R.EXIT
10$:    RTS     PC
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>RARIN.PAT=RARIN.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>RARIN.OLD=$RPGLIB/EX:R.ARIN
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>RARIN=RARIN.OLD/CS:017044,RARIN.PAT/CS:016047
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGLIB/RP=RARIN
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
  for RSTS/E V7
OTS V8.02T

Seq 32.3.21 M

1 of 2

RPGASN ALLOWS ONLY 84 ENTRIES - MANDATORY OTS PATCH (YL)

PROBLEM:

RPGASN.TSK only allows a maximum of 84 entries in the RPGASN.DAT file.

SOLUTION:

The patch detailed below increases the maximum number of entries to 252.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGLIB.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXDTT.COR

```
        .TITLE  XXDTT - RPGASN AUXILIARY DATA
        .IDENT  /V2.03/ ;20-MAR-79 YL
$$BASE=.
.       =$$BASE+1600
        T.TBL:: .BLKW   3000
        T.BFR:: .BLKW   6000
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXDTT.PAT=XXDTT.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXDTT.OLD=$RPGLIB/EX:XXDTT
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXDTT=XXDTT.OLD/CS:042404,XXDTT.PAT/CS:006436
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGLIB/RP=XXDTT
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build the RPGASN.TSK file, after installing all published patches, as described in Section C.4 of the CTS-500 RPG II REPORT PROGRAM GENERATOR USER'S GUIDE.

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.22 M

RANDOM ACCESS TO SEQUENTIAL FILES - MANDATORY OTS PATCH (YL)

PROBLEM:

Random access to a sequential file (using the CHAIN operation) produces the next sequential record instead of the record specified.

SOLUTION:

The patches detailed below will correct the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library files (RPGLIB.OLB and RPGCOM.OLB) and the RPG ODL files (RPG0.ODL, RPG1.ODL, RPG2.ODL) are located on the public disk structure in the system library account ($). If these files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. First correct the RPG ODL files using the RSTS/E patching program, CPATCH. You should substitute a file name for the [logfile=] in the procedure below, since the same patch is to be applied to all three ODL files.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - RPG0.ODL=$RPG0.ODL
#[logfile=]
*H/RMSREC:/G/RM0X26/0L<cr>
RMSREC:<tab>.FCTR<tab>RMSRAB-(RMSCDX,RMSSQ0,RM0X26*I/,RMSBLK/0L<cr>
RMSREC:<tab>.FCTR<tab>RMSRAB-(RMSCDX,RMSSQ0,RM0X26,RMSBLK*H/;RMSBLK/V<cr>
;RMSBLK:<tab>.FCTR<tab>RMSBMC-RMMISC<cr>
*0ADV<cr>
RMSBLK:<tab>.FCTR<tab>RMSBMC-RMMISC<cr>
*2ADV<cr>
RMMISC:<tab>.FCTR<tab>RMSMIS-RMMIS0<cr>
*ADV<cr>
RMMIS0:<tab>.FCTR<tab>[1,1]RMSLIB/LB:R0FREE:R1TRUN-RMMIS1<cr>
*ADV<cr>
RMMIS1:<tab>.FCTR<tab>[1,1]RMSLIB/LB:R0RWIN:R2CALC-RMWATR-RMMAGT<cr>
```

```
*ADV<cr>
RMWATR:<tab>.FCTR<tab>[1,1]RMSLIB/LB:R0WATR-RMR1WL-RMR1RL-RMEXTD<cr>
*ADV<cr>
RMMAGT:<tab>.FCTR<tab>[1,1]RMSLIB/LB:R0MAGT<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

2. Now apply the same patch to the other ODL files: RPG1.ODL and RPG2.ODL. Note that if you specified a file for [logfile=], you can use that same file as a patch command file as illustrated below.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - RPG1.ODL=$RPG1.ODL
#[=logfile]
*<Same patch applied here>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - RPG2.ODL=$RPG2.ODL
#[=logfile]
*<Same patch applied here>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. Now re-install the three RPG ODL files into the system library as follows.

```
RUN $PIP.SAV
*$<40>=RPG0.ODL,RPG1.ODL,RPG2.ODL
*^Z

Ready
```

4a. Build the following source file using an editor and name it: XXORG.MAC

```
        .TITLE  XXORG
        .IDENT  /V8.02/ ;30-JAN-79 YL
        .MCALL  ORG$
$XXORG::ORG$    SEQ,<CRE,FIN,GET,PUT,UPD>
        ORG$    REL,<CRE,FIN,GET,PUT,UPD>
        .END
```

4b. Build the following correction file using an editor and name it: XXRDM.COR

```
            .TITLE  XXRDM -- RPG RANDOM FILE I/O
            .IDENT  /V8.02/ ;30-JAN-79 YL
            CB=%2
            F.RECN=104
      $$BASE=.
      .     =$$BASE+246
            NOP
            NOP
            NOP
            JSR     PC,PATCH                ;FIND THE RECORD
      .     =$$BASE+1036
      PATCH: JSR    PC,RMSRWD               ;REWIND
            BCS     PATCH                   ;
            MOV     F.RECN(CB),-(SP)        ;SET COUNT
            MOV     F.RECN+2(CB),-(SP)      ;
      20$:  JSR     PC,RMSFIN               ;FIND
            BCS     20$                     ;
            SUB     #1,(SP)                 ;DECREMENT COUNT
            SBC     2(SP)                   ;
            BNE     20$                     ;
            TST     (SP)                    ;
            BNE     20$                     ;
            TST     (SP)+                   ;
            TST     (SP)+                   ;POP COUNT FORM STACK
            RTS     PC                      ;
            .END
```

4c. Build the following correction file using an editor and name it: RPGIO.COR

```
            .TITLE  RPGIO
            .IDENT  /V8.03/ ;30-JAN-79 YL
            .MCALL  $REWIND
      $$BASE=.
      .     =$$BASE+304
            BR      CHKERR
      RMSRWD::$REWIND R5
      CHKERR::JSR   PC,$ERRMS
            RTS     PC
            .END
```

5. Assemble the source and correction files as follows:

```
RUN $MAC.TSK
MAC>XXORG=LB:RMSMAC/ML,[your acct]XXORG
MAC>XXRDM.PAT=XXRDM.COR
MAC>RPGIO.PAT=LB:RMSMAC/ML,[your acct]RPGIO.COR
MAC>^Z                                          (CTRL/Z to exit)
```

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.22 M

4 of 4

6. Extract the original modules as follows:

```
RUN $LBR.TSK
LBR>XXRDM.OLD=$RPGCOM/EX:XXRDM
LBR>RPGIO.OLD=$RPGCOM/EX:RPGIO
LBR>^Z                                          (CTRL/Z to exit)
```

7. Run the patch utility to merge the old modules and corrections:

```
RUN $PAT.TSK
PAT>XXRDM=XXRDM.OLD/CS:163132,XXRDM.PAT/CS:021615
PAT>RPGIO=RPGIO.OLD/CS:102306,RPGIO.PAT/CS:020041
PAT>^Z                                          (CTRL/Z to exit)
```

8. Replace the new and patched modules in the libraries:

```
RUN $LBR.TSK
LBR>$RPGLIB/RP=XXORG
LBR>$RPGCOM/RP=XXRDM
LBR>$RPGCOM/RP=RPGIO
LBR>^Z                                          (CTRL/Z to exit)
```

9. You should now take whatever steps are necessary, according to your installation guidelines, to save the new source and correction files.

10. The command file and other files used during the patching procedures should now be removed from the public structure.

11. Re-build your tasks to run with the corrections installed.

RPG II V8.02
  for RSTS/E V7
OTS V8.02T

Seq 32.3.23 M

RPG ERROR #15 OCCURS IMPROPERLY - MANDATORY OTS PATCH (YL)

PROBLEM:

RPG ERROR #15 will occur if a READ operation follows after an unsuccessful CHAIN operation.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGCOM.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXRDM.COR

```
        .TITLE  XXRDM -- RPG RANDOM FILE I/O
        .IDENT  /V8.03/ ;27-FEB-79 YL
        CB=%2
        CR=%3
        F.STAT=77
        X.ERR=252
$$BASE=.
.       =$$BASE+12
        JSR     PC,$$BASE+1106
.       =$$BASE+1106
        CLRB    F.STAT(CB)      ;CLEAR ERROR STATUS IN FCB
        CLR     X.ERR(CR)       ;CLEAR ERROR STATUS IN COM REGION
        RTS     PC
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXRDM.PAT=XXRDM.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXRDM.OLD=$RPGCOM/EX:XXRDM
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXRDM=XXRDM.OLD/CS:000131,XXRDM.PAT/CS:006006
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXRDM
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.24 M

/BU: SWITCH IN RPGASN.DAT DOES NOT FUNCTION - MANDATORY OTS PATCH (YL)

PROBLEM:

The RPG OTS ignores the bucket size switch (/BU:) specified in the RPGASN.DAT file, when a new file is created.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGCOM.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXOPN.COR

```
            .TITLE  XXOPN -- OPEN RPG OTS FILES
            .IDENT  /V8.04/ ; 1-MAR-79 YL
            .MCALL  FABOF$
            FABOF$  RMS$L
      $$BASE=.
      .     =$$BASE+1774
            JSR     PC,$$BASE+2736
      .     =$$BASE+2736
            TSTB    O$BKS(R5)       ;BUCKED SIZE SPECIFIED?
            BNE     10$             ;YES
            MOVB    R3,O$BKS(R5)    ;SET DEFAULT BUCKET SIZE
      10$:  RTS     PC
            .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXOPN.PAT=LB:RMSMAC/ML,[your acct]XXOPN.COR
MAC>^Z                                          (CTRL/Z to exit)
```

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.24 M

2 of 2

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXOPN.OLD=$RPGCOM/EX:XXOPN
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXOPN=XXOPN.OLD/CS:151262,XXOPN.PAT/CS:011211
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXOPN
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02 Seq 32.3.25 M
for RSTS/E V7
OTS V8.02T 1 of 2

CHAINED INPUT FILE OPENED AS UPDATE, CAUSES FILE SHARING PROBLEMS
- MANDATORY OTS PATCH (YL)

PROBLEM:

A file cannot be shared by more than one reader without specifying the /MU switch in the RPGASN.DAT file. RPG opens chained input files as update, causing file sharing problems.

SOLUTION:

The patch detailed below corrects the problem.

NOTE

Previous patches must be installed before this one.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGCOM.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXOPN.COR

```
        .TITLE  XXOPN -- OPEN RPG OTS FILES
        .IDENT  /V8.05/ ;26-MAR-79 YL
; *** THIS IS A TEMPORARY OTS PATCH TO BYPASS COMPILER BUG.
; *** NAMELY, CHAINED INPUT FILE IS NOT A UPDATE FILE.
$$BASE=.
        =$$BASE+1064
        NOP
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXOPN.PAT=XXOPN.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXOPN.OLD=$RPGCOM/EX:XXOPN
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXOPN=XXOPN.OLD/CS:156220,XXOPN.PAT/CS:004542
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXOPN
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V7
OTS V8.02T

Seq 32.3.26 M

UPDATING SEQUENTIAL FILES SEQUENTIALLY - MANDATORY OTS PATCH (YL)

PROBLEM:

The patch published in Article Seq. No. 32.3.22, entitled RANDOM ACCESS TO SEQUENTIAL FILES, inadvertantly disabled the sequential updating of sequential files.

NOTE

Do not disable or in any way modify the patches installed by Article Seq. No. 32.3.22, but rather install this patch after that one has been completed.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGCOM.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXRDM.COR

```
                .TITLE  XXRDM -- RPG RANDOM FILE I/O
                .IDENT  /V8.04/ ;6-APR-79 YL
                CB=%2
                INPUTF=100
                F.FLGS=2
                F.RECN=104
                O$STS=6
        $$BASE=.
        .       =$$BASE+246
                JSR     PC,PATCH1
        .       =$$BASE+1054
                JSR     PC,PATCH2
                NOP
        .       =$$BASE+1120
```

```
PATCH1: ADD     #1,D.RECN(R4)    ;INCREMENT RECORD # IN XFB
        ADC     D.RECN+2(R4)     ;
        BIT     #INPUTF,F.FLGS(CB)      ;CHAINED FILE?
        BNE     10$              ;NO
        MOV     F.RECN(CB),D.RECN+2(R4) ;UPDATE RECORD # IN XFB
        MOV     F.RECN+2(CB),D.RECN(R4) ;
        RTS     PC
10$:    TST     (SP)+            ;POP RETURN ADDR
        JMP     $$BASE+260       ;-> GET RECORD
PATCH2: JSR     PC,RMSFIN        ;FIND
        BCS     PATCH2           ;
        TST     O$STS(R5)        ;RMS ERROR?
        BLE     10$              ;YES
        RTS     PC
10$:    TST     (SP)+            ;POP RETURN ADDR
        JMP     $$BASE+1100      ;-> POP REC COUNT FROM STACK
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXRDM.PAT=XXRDM.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXRDM.OLD=$RPGCOM/EX:XXRDM
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXRDM=XXRDM.OLD/CS:002357,XXRDM.PAT/CS:025313
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXRDM
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V7
OTS V8.Ø2U

Seq 32.3.27 M

1 of 2

ACCESSING RELATIVE FILES BEYOND RECORD NUMBER 65,535 (JV)

PROBLEM:

There is an error in Patch 8.02M that makes records beyond record number 65,535 in a relative file inaccessible. Attempting to access more records results in an RMS error -944.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPG OTS patch command file is located on the public disk structure. In the patching procedure we will, therefore, refer to that file by its simplest form: RPGPAT.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGPAT.CMD=RPGPAT.CMD<cr>
#[logfile=]<cr>
*H/V8.02M/V<cr>
; V8.02M -- SEQUENTIAL UPDATE OF RELATIVE FILES<cr>
*H/V8.02T -- MATCHING RECORD/V<cr>
; V8.02T -- MATCHING RECORD<cr>
*7AV<cr>
;<cr>
*AI<cr>
; V8.02U -- CORRECTION TO PATCH V8.02M<cr>
GBLPAT=RMSOV:M.PAT+406:14<cr>
;<cr>
;**END OF PATCH FILE**<cr>
<esc>*EX<cr>
```

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG OTS patch command file in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGPAT.CMD<40>=RPGPAT.CMD<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. It is necessary to re-task build your RPG programs in order to take advantage of the correction just made. It is not necessary to re-compile.

RPG II V8.Ø2
for RSTS/E V7

RPG ERROR #15 OCCURS AFTER UNSUCCESSFUL CHAIN (JV)

PROBLEM:

RPG ERROR #15 will occur if a sequential READ operation follows after an unsuccessful CHAIN operation.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGCOM.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXSEQ.COR

```
        .TITLE  XXSEQ -- RPG SEQUENTIAL I/O
        .IDENT  /V8.02/ ;++5-JUN-79 JV
        CR=%3
        X.ERR=252
$$BASE=.
.       =$$BASE
        JSR     PC,$$BASE+534
.       =$$BASE+534
        CLR     X.ERR(CR)       ;CLEAR ERROR STATUS IN COM REGION
        MOV     D.BFR,R1        ; -> LINK BLOCK
        RTS     PC
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXSEQ.PAT=XXSEQ.COR
MAC>Z                                                   (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXSEQ.OLD=$RPGCOM/EX:XXSEQ
LBR>Z                                                    (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXSEQ=XXSEQ.OLD/CS:114353,XXSEQ.PAT/CS:007467
PAT>Z                                                    (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXSEQ
LBR>Z                                                    (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V7
RPGFNS V2-00

LEADING ZEROES IN UNPACK DECIMAL - RPGFNS PATCH (JE)

PROBLEM:

There is an apparent inconsistency between BASIC-PLUS and BASIC-PLUS-2 in the handling of loop counters. As a result, the Unpack Decimal function (FNU$) does not process leading zeroes correctly in unpacking.

SOLUTION:

Until such time as the inconsistency is resolved in BASIC-PLUS-2, the optional patch detailed below will correct the problem.

NOTE

This patch is only necessary if you are unpacking decimal fields which include leading zeroes.

PROCEDURE:

1. For purposes of the discussion, we will assume that the source file of the RPG functions is located on the public disk structure. In the patching procedure, we will, therefore, refer to the file by its simplest form: RPGFNS.B2S. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGFNS.B2S=RPGFNS.B2S<cr>
#[logfile=]<cr>
*H/RPGFNS/V<cr>
22002<tab>!<tab>Program<tab><tab>: RPGFNS<cr>
*H/22160<tab>/V<cr>
22160<tab>W7%=LEN(W$)<tab>W6$=RIGHT(W$,W7%) <cr>
*AV<cr>
<tab>W6%=W6% FOR W6%=1% STEP 1% UNTIL MID(W$,W6%,1%)>"0" <cr>
*KI<cr>
<tab>W6%=1% UNTIL MID(W$,W6%,1%)>="0" W6%=W6%+1% NEXT <cr>
<esc>*V<cr>
<tab>W$=MID(W$,W6%,W7%-W6%)<tab>W$="0" IF W$="" <cr>
```

```
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace the RPG functions in the system library, type the following RSTS/E commands.

```
RUN $PIP.SAV<cr>
*$RPGFNS.B2S<40>=RPGFNS.B2S<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the functions.

RPG II V8.02
for RSTS/E V7
RPGASN V2.02

Seq 32.5.1 M

ALLOCATE AND APPEND SWITCHES - MANDATORY RPGASN PATCH (SPR 11-18291 JE)

PROBLEM:

Specifying /AL[LOCATE] or /AP[PEND] in a file reassignment (using RPGASN) causes these attributes to be applied to the assignment file (RPGASN.DAT) as well as the assigned filespec. For example, the entry AAA=OUTPUT.DAT/AL:100 causes 100 blocks to be allocated to RPGASN.DAT when RPGASN is exited.

SOLUTION:

The patch detailed below corrects this problem.

NOTE

This patch must be applied to the (unpatched) RPGASN.CMD file that is included in the RPG II V8.02 distribution kit.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGASN task build command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGASN.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that the other necessary file (RPGASN.ODL) is located in that account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGASN.CMD=RPGASN.CMD<cr>
#[logfile=]<cr>
*H/$RPGASN/V<cr>
$RPGASN=RPGASN/MP<cr>
*0ADV<cr>
RPGASN=RPGASN/MP<cr>
*4AV<cr>
/<cr>
```

```
*I<cr>
;<cr>
; INSERT PATCHES HERE -- V2.02<cr>
;<cr>
; V2.02A -- APPEND AND ALLOCATE SWITCHES<cr>
GBLPAT=RMS11:D.ALTB+2:34632<cr>
GBLPAT=RMS11:D.APTB+2:34632<cr>
<esc>*V<cr>
/<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGASN program and re-enter it into the system library, type the following RSTS/E commands.

```
RUN $TKB.TSK<cr>
TKB>@RPGASN<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGASN.TSK=RPGASN.TSK<cr>
*=$RPGASN.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. The command file and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
RPGASN

Seq 32.5.2 R

1 of 1

$$X WITH NO EXTERNAL INDICATORS (SPR #11-18287 JE)

It is not possible to specify a $$X (External Indicators) assignment with RPGASN and specify no indicators on. The command "$$X=" means to delete the entry entirely, and thus cannot be used to mean that no indicators are to be turned on.

You can either (1) answer the standard RPG OTS query ("Enter External Indicators:") at the terminal or in the batch stream, or (2) specify "$$X=Un" where indicator n is not used in the program(s).

RPG II V8.02
for RSTS/E V7
RPGASN V2.02A

Seq 32.5.3 M

CHANGING ENTRIES WHICH USE /TASK - MANDATORY RPGASN PATCH (SPR 11-18780 JE)

PROBLEM:

After changing an existing entry which specifies a task, e.g.:

```
LPT/TA:PAYROL=LP1:
```

subsequent entries, changes, and deletions will not be made correctly. Duplicates may appear, and certain entries may become inaccessible.

SOLUTION:

The patch detailed below corrects this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGASN task build command file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGASN.CMD. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that the other necessary file (RPGASN.ODL) is located in that account.

2. The command file for this patch appears in patch kit version "C" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGASN.CMD=RPGASN.CMD<cr>
#[logfile=]<cr>
*H/V2.02A/V<cr>
; V2.02A -- APPEND AND ALLOCATE SWITCHES<cr>
*2AV<cr>
GBLPAT=RMS11:D.APTB+2:34632<cr>
*AI<cr>
;<cr>
; V2.02B -- CHANGING ENTRIES WHICH USE /TASK<cr>
GBLPAT=RMS11:.ASN+2044:62767:14:30542<cr>
GBLPAT=RMS11:.ASN+2074:402<cr>
<esc>*V<cr>
/<cr>
*EX<cr>
```

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGASN program and re-enter it into the system library, type the following RSTS/E commands.

```
RUN $TKB.TSK<cr>
TKB>@RPGASN<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGASN.TSK=RPGASN.TSK<cr>
*=$RPGASN.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the command file.

5. The command file and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
RPGDCV V2-02

CONVERT NEGATIVE PACKED DATA - MANDATORY RPGDCV PATCH (GT)

PROBLEM:

RPGDCV uses a PRINT statement to create a sequential RMS file. This may cause problems when there is negative packed data in the input file.

SOLUTION:

The patch detailed below corrects the problem.

NOTE

There are two versions of this patch: version "A" applies to the BASIC-PLUS-2 source form of RPGDCV (installed by RPGGEN.CTL), and version "B" applies to the MACRO-11 source form of RPGDCV (installed by RPGNB2.CTL).

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGDCV source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: either RPGDCV.B2S or RPGDCV.MAC. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that any other necessary files (RPGDCV.CMD and RPGDCV.ODL for the MACRO-11 version) are located in that account.

2. The command files for this patch appear in patch kit version "D" or later. (The BASIC-PLUS-2 version is in patch kit version "C".) If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

A - BASIC-PLUS-2

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGDCV.B2S=RPGDCV.B2S<cr>
#[logfile=]<cr>
*H/EDIT 02/V<cr>
1!**<tab>RPGDCV<tab><tab>VERSION 2<tab>EDIT 02<tab><tab>09-AUG-77<cr>
```

RPG II V8.02 Seq 32.6.1 M
for RSTS/E V7
RPGDCV V2-02 2 of 4

```
*-C/3/G/09-AUG-77/-9C/22-JUN-78/V<cr>
1!**<tab>RPGDCV<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>22-JUN-78<cr>
*G/1977,/V<cr>
!****<tab>Copyright (C) 1975,1976,1977, &<cr>
*I/1978,/V<cr>
!****<tab>Copyright (C) 1975,1976,1977,1978, &<cr>
*H/V2-02/V<cr>
1030<tab>PRINT 'RPGDCV V2-02'<cr>
*-C/3/V<cr>
1030<tab>PRINT 'RPGDCV V2-03'<cr>
*H/2327<tab>/V<cr>
2327<tab>PRINT #2%,B2$<cr>
*-JKI<cr>
<tab>MOVE TO #2%, B2$\ PUT #2%<cr>
<esc>*V<cr>
2328<tab>PRINT #10%, D8$<cr>
*G/2328<tab>/-JKI<cr>
<tab>MOVE TO #10%, D8$\ PUT #10%<cr>
<esc>*V<cr>
2329<tab>IF P8%=2% THEN 8062 &<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

B - MACRO-11

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGDCV.MAC=RPGDCV.MAC<cr>
#[logfile=]<cr>
*H/12848/V<cr>
<tab>.WORD<tab>12848<cr>
*-5C/13104/V<cr>
<tab>.WORD<tab>13104<cr>
*AL<cr>
<tab>.WORD<tab>$PDATA+40<cr>
*H/V2-02/V<cr>
<tab>RLI$M <tab>,$PDATA+20<tab>; "RPGDCV V2-02"<cr>
*-C/3/V<cr>
<tab>RLI$M <tab>,$PDATA+20<tab>; "RPGDCV V2-03"<cr>
*H/L2327:/V<cr>
L2327:<tab>MOI$IS<tab>,2<tab><tab>; #2<cr>
*AL<cr>
<tab>IPT$<tab><cr>
*G/IP/-C/M/V<cr>
<tab>IMT$<tab><cr>
*2AL<cr>
<tab>PVS$AI<tab>,0<tab><tab>; #0<cr>
```

RPG II V8.02
   for RSTS/E V7
RPGDCV V2-02

Seq 32.6.1 M

3 of 4

```
*KI<cr>
<tab>MTS$  <tab><cr>
<esc>*V<cr>
<tab>EOL$<tab><cr>
*AI<cr>
<tab>MOI$IS<tab>,2<tab><tab>; #2<cr>
<tab>RPN$<tab><cr>
<esc>*AL<cr>
L2328:<tab>MOI$IS<tab>,10<tab><tab>; #10<cr>
*AL<cr>
<tab>IPT$<tab><cr>
*G/IP/-C/M/V<cr>
<tab>IMT$<tab><cr>
*2AL<cr>
<tab>PVS$AI<tab>,0<tab><tab>; #0<cr>
*KI<cr>
<tab>MTS$  <tab><cr>
<esc>*V<cr>
<tab>EOL$<tab><cr>
*AI<cr>
<tab>MOI$IS<tab>,10<tab><tab>; #10<cr>
<tab>RPN$<tab><cr>
<esc>*AL<cr>
L2329:<tab>CMI$MI<tab>,$IDATA+3048<tab>; P8%<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGDCV program and re-enter it into the system library, type the following RSTS/E commands.

A - BASIC-PLUS-2

```
RUN $BASIC2.TSK<cr>

<BASIC-PLUS-2's header line>


Basic2

OLD RPGDCV<cr>

Basic2

HISEG<cr>
Name--BP2COM<cr>
Account--LB:<cr>

Basic2
```

```
COMPILE/OBJ<cr>

Basic2

BUILD/SEQ<cr>

Basic2

RUN $TKB.TSK<cr>
TKB>@RPGDCV<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGDCV.TSK=RPGDCV.TSK<cr>
*=$RPGDCV.TSK<232>/RE<cr>
*^Z

Ready
```

B - MACRO-11

```
RUN $MAC.TSK<cr>
MAC>RPGDCV=RPGDCV<cr>
MAC>^Z

Ready

RUN $TKB.TSK<cr>
TKB>@RPGDCV<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*=$RPGDCV.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the program.

5. The source (.B2S or .MAC) version of the program and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
RPGDCV V2-03

Seq 32.6.2 M

ILLEGAL FILE NAME IN TAPE LABELS - MANDATORY RPGDCV PATCH (11-19957 GT)

PROBLEM:

When RPGDCV is used to convert files from a labelled tape, if the file name in the label is less than 6 characters in length, an "?Illegal file name" error message may be given.

SOLUTION:

The patch detailed below corrects this problem.

NOTE

> There are two versions of this patch: version "A" applies to the BASIC-PLUS-2 source form of RPGDCV (installed by RPGGEN.CTL), and version "B" applies to the MACRO-11 source form of RPGDCV (installed by RPGNB2.CTL).

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGDCV source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: either RPGDCV.B2S or RPGDCV.MAC. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that any other necessary files (RPGDCV.CMD and RPGDCV.ODL for the MACRO-11 version) are located in that account.

2. The command files for this patch appear in patch kit version "E" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

A - BASIC-PLUS-2

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGDCV.B2S=RPGDCV.B2S<cr>
#[logfile=]<cr>
```

RPG II V8.02 Seq 32.6.2 M
for RSTS/E V7
RPGDCV V2-03 2 of 4

```
*H/EDIT 03/V<cr>
1!**<tab>RPGDCV<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>22-JUN-78<cr>
*-C/4/G/22-JUN/-6C/20-DEC/V<cr>
1!**<tab>RPGDCV<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>20-DEC-78<cr>
*H/V2-03/V<cr>
1030<tab>PRINT 'RPGDCV V2-03'<cr>
*-C/4/V<cr>
1030<tab>PRINT 'RPGDCV V2-04'<cr>
*H/2067<tab>/V<cr>
2067<tab>GET  1% &<cr>
*2AL<cr>
<tab>N1$=XLATE(H2$,T$)\ &<cr>
*G/=/I/EDIT$(/G/)/I/,2%)/V<cr>
<tab>N1$=EDIT$(XLATE(H2$,T$),2%)\ &<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

B - MACRO-11

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGDCV.MAC=RPGDCV.MAC<cr>
#[logfile=]<cr>
*H/13104/V<cr>
<tab>.WORD<tab>13104<cr>
*-3C/360/V<cr>
<tab>.WORD<tab>13360<cr>
*AL<cr>
<tab>.WORD<tab>$PDATA+40<cr>
*H/V2-03/V<cr>
<tab>RLI$M <tab>,$PDATA+20<tab>; "RPGDCV V2-03"<cr>
*-C/4/V<cr>
<tab>RLI$M <tab>,$PDATA+20<tab>; "RPGDCV V2-04"<cr>
*H/L2067:/V<cr>
L2067:<tab>ONI$S <tab><cr>
*13AL<cr>
<tab>XLT$<tab><cr>
*AI<cr>
<tab>CLI$S <tab><cr>
<tab>MOI$IS<tab>,2<tab><tab>; #2<cr>
<tab>CVT$<tab><cr>
<esc>*V<cr>
<tab>MOS$SM<tab>,$STRNG+1536<tab>; N1$<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGDCV program and re-enter it into the system library, type the following RSTS/E commands.

A - BASIC-PLUS-2

```
RUN $BASIC2.TSK<cr>

<BASIC-PLUS-2's header line>


Basic2

OLD RPGDCV<cr>

Basic2

HISEG<cr>
Name--BP2COM<cr>
Account--LB:<cr>

Basic2

COMPILE/OBJ<cr>

Basic2

BUILD/SEQ<cr>

Basic2

RUN $TKB.TSK<cr>
TKB>@RPGDCV<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGDCV.TSK=RPGDCV.TSK<cr>
*=$RPGDCV.TSK<232>/RE<cr>
*^Z

Ready
```

B - MACRO-11

```
RUN $MAC.TSK<cr>
MAC>RPGDCV=RPGDCV<cr>
MAC>^Z

Ready
```

```
RUN $TKB.TSK<cr>
TKB>@RPGDCV<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*=$RPGDCV.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the program.

5. The source (.B2S or .MAC) version of the program and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
RPGDMP V2-03

Seg 32.7.1 M

ILLEGAL VARIABLE NAME IN BASIC-PLUS-2 SOURCE - MANDATORY RPGDMP PATCH (GH)

PROBLEM:

There is an illegal variable name in the BASIC-PLUS-2 source of RPGDMP that causes an "?Illegal reserved word" error with BASIC-PLUS-2 V1.50.

SOLUTION:

The patch detailed below will correct this problem.

NOTE

This patch applies only to the BASIC-PLUS-2 source form of RPGDMP (installed by RPGGEN.CTL).

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGDMP source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: RPGDMP.B2S. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command files for this patch appear in patch kit version "E" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGDMP.B2S=RPGDMP.B2S<cr>
#[logfile=]<cr>
*H/RPGDMP/V<cr>
2<tab>!<tab>Program<tab><tab>: RPGDMP<cr>
*2AL<cr>
6<tab>!<tab>Edit<tab><tab>: 03<cr>
*G/03/-C/4/V<cr>
6<tab>!<tab>Edit<tab><tab>: 04<cr>
*AL<cr>
7<tab>!<tab>Edit Date<tab>: 06-SEP-77<cr>
*G/06-SEP-77/-9C/20-SEP-78/V<cr>
7<tab>!<tab>Edit Date<tab>: 20-SEP-78<cr>
```

RPG II V8.02 Seq 32.7.1 M
for RSTS/E V7
RPGDMP V2-03 2 of 3

```
*5AL<cr>
11<tab>!<tab>Copyright (C) 1976,77, &<cr>
*G/77,/I/78,/V<cr>
11<tab>!<tab>Copyright (C) 1976,77,78, &<cr>
*H/V02-03/V<cr>
<tab>!<tab>V02-03<tab><tab>06-SEP-77:JLE<tab>XLATE HEX TRANSLATION<cr>
*G/ION/I<cr>
 &<cr>
<tab>!<tab>V02-04<tab><tab>20-SEP-78:GJH<tab>BASIC-PLUS-2 V1.50<esc>*V<cr>
<tab>!<tab>V02-04<tab><tab>20-SEP-78:GJH<tab>BASIC-PLUS-2 V1.50<cr>
*H/V2-03/V<cr>
1000<tab>EXTEND \ IDENT$="RPGDMP V2-03" \ ON ERROR GO TO 19000 &<cr>
*-C/4/V<cr>
1000<tab>EXTEND \ IDENT$="RPGDMP V2-04" \ ON ERROR GO TO 19000 &<cr>
*H/3000<tab>/V<cr>
3000<tab>IF ORG%=SEQ% THEN &<cr>
*7AL<cr>
<tab><tab>POS%=VAL(ARG$(1%)) \ LEN%=VAL(ARG$(3%)) \ J%=0% &<cr>
*G/POS/I/./V<cr>
<tab><tab>POS.%=VAL(ARG$(1%)) \ LEN%=VAL(ARG$(3%)) \ J%=0% &<cr>
*H/3031<tab>/V<cr>
3031<tab>IF ORG%=IND% THEN &<cr>
*2AL<cr>
<tab>POS%=INSTR(1%,S1$,KEY1$) IF POS%=0% \ KEYX$=MID(S1$,POS%,LEN%) \ &<cr>
*G/POS/I/./G/POS/I/./G/POS/I/./V<cr>
<tab>POS.%=INSTR(1%,S1$,KEY1$) IF POS.%=0% \ KEYX$=MID(S1$,POS.%,LEN%) \ &<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGDMP program and re-enter it into the system library, type the following RSTS/E commands.

```
RUN $BASIC2.TSK<cr>

<BASIC-PLUS-2's header line>


Basic2

OLD RPGDMP<cr>

Basic2

HISEG<cr>
Name--BP2COM<cr>
Account--LB:<cr>

Basic2
```

```
COMPILE/OBJ<cr>

Basic2

BUILD/SEQ/REL/IND<cr>

Basic2

RUN $TKB.TSK<cr>
TKB>@RPGDMP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGDMP.TSK=RPGDMP.TSK<cr>
*=$RPGDMP.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the program.

5. The source (.B2S) version of the program and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
RPGESP V2-04

Seq 32.8.1 M

SPORADIC CONCATENATION OF STATEMENTS - MANDATORY RPGESP PATCH (JE)

PROBLEM:

RPGESP sporadically concatenates statements.

SOLUTION:

The patch detailed below will correct this problem.

NOTE

There are two versions of this patch: version "A" applies to the BASIC-PLUS-2 source form of RPGESP (installed by RPGGEN.CTL), and version "B" applies to the MACRO-11 source form of RPGESP (installed by RPGNB2.CTL).

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGESP source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: either RPGESP.B2S or RPGESP.MAC. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that any other necessary files (RPGESP.CMD and RPGESP.ODL for the MACRO-11 version) are located in that account.

2. The command files for this patch appear in patch kit version "E" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

A - BASIC-PLUS-2

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGESP.B2S=RPGESP.B2S<cr>
#[logfile=]<cr>
*H/RPGESP/V<cr>
2<tab>!<tab>Program<tab><tab>: RPGESP<cr>
```

RPG II V8.02
   for RSTS/E V7
RPGESP V2-04

Seq 32.8.1 M

2 of 4

```
*2AL<cr>
6<tab>!<tab>Edit<tab><tab>: 04<cr>
*G/04/-C/5/V<cr>
6<tab>!<tab>Edit<tab><tab>: 05<cr>
*AL<cr>
7<tab>!<tab>Edit Date<tab>: 07-SEP-77<cr>
*G/07-SEP-77/V<cr>
7<tab>!<tab>Edit Date<tab>: 07-SEP-77<cr>
*-9C/08-SEP-78/V<cr>
7<tab>!<tab>Edit Date<tab>: 08-SEP-78<cr>
*5AL<cr>
11<tab>!<tab>Copyright (C) 1975,76,77,  &<cr>
*G/76,77/-4C/7,78/V<cr>
11<tab>!<tab>Copyright (C) 1975,77,78,  &<cr>
*H/V2-04/V<cr>
<tab>!<tab>V2-04<tab><tab>06-SEP-77<tab>RENUMBER >32767, CCL<cr>
*G/CCL/I<cr>
 &<cr>
<tab>!<tab>V2-05<tab><tab>08-SEP-78:JLE<tab>LINE CONCATENATION<esc>*V<cr>
<tab>!<tab>V2-05<tab><tab>08-SEP-78:JLE<tab>LINE CONCATENATION<cr>
*H/V2-04/V<cr>
1010<tab>ID$="RPGESP V2-04 [RSTS:BP2]" \ ON ERROR GO TO 8000 &<cr>
*-C/5/V<cr>
1010<tab>ID$="RPGESP V2-05 [RSTS:BP2]" \ ON ERROR GO TO 8000 &<cr>
*H/5600<tab>G/V<cr>
5600<tab>GOSUB 9400 \ PRINT CR$+LF$+EOS$+"[Closing File...]" \ &<cr>
*AL<cr>
<tab>PRINT #K3%,NXT$; IF NXT$<>"" \ &<cr>
*G/NXT$/DV<cr>
<tab>PRINT #K3%,NXT$ IF NXT$<>"" \ &<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

B - MACRO-11

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGESP.MAC=RPGESP.MAC<cr>
#[logfile=]<cr>
*H/RPGESP/V<cr>
<tab>.TITLE<tab>RPGESP<cr>
*AL<cr>
<tab>.IDENT<tab>/001000/<cr>
*H/13360/V<cr>
<tab>.WORD<tab>13360<cr>
*-3C/616/V<cr>
<tab>.WORD<tab>13616<cr>
```

RPG II V8.02
for RSTS/E V7
RPGESP V2-04

Seq 32.8.1 M

3 of 4

```
*H/V2-04/V<cr>
<tab>MOS$MM<tab>,$PDATA+20<tab>; "RPGESP V2-04 [RSTS:BP2]"<cr>
*-C/5/V<cr>
<tab>MOS$MM<tab>,$PDATA+20<tab>; "RPGESP V2-05 [RSTS:BP2]"<cr>
*H/L5600:/V<cr>
L5600:<tab>LIN$<tab>,5600<tab><tab>;  5600<cr>
*G/; K3%/V<cr>
<tab>MOI$MS<tab>,$IDATA+1462<tab>; K3%<cr>
*G/NXT$/V<cr>
<tab>RLI$M <tab>,$STRNG+1772<tab>; NXT$<cr>
*AL<cr>
<tab>PVS$AI<tab>,-1<tab><tab>;  -1<cr>
*G/-1/-2C/0/G/-1/-2C/0/V<cr>
<tab>PVS$AI<tab>,0<tab><tab>;  0<cr>
*2AL<cr>
T86:<tab>TSI$M <tab>,$IDATA+1486<tab>; NEWFIL%<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGESP program and re-enter it into the system library, type the following RSTS/E commands.

```
A - BASIC-PLUS-2

RUN $BASIC2.TSK<cr>

<BASIC-PLUS-2's header line>


Basic2

OLD RPGESP<cr>

Basic2

HISEG<cr>
Name [??????]--BP2COM<cr>
Account [???]--LB:<cr>

Basic2

COMPILE/OBJ<cr>

Basic2

BUILD/SEQ<cr>

Basic2
```

```
RUN $TKB.TSK<cr>
TKB>@RPGESP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGESP.TSK=RPGESP.TSK<cr>
*=$RPGESP.TSK<232>/RE<cr>
*^Z

Ready
```

B - MACRO-11

```
RUN $MAC.TSK<cr>
MAC>RPGESP=RPGESP<cr>
MAC>^Z

Ready

RUN $TKB.TSK<cr>
TKB>@RPGESP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*=$RPGESP.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the program.

5. The source (.B2S or .MAC) version of the program and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
RPGESP V2-05

Seq 32.8.2 M

PROBLEM DELETING FIRST LINE - MANDATORY RPGESP PATCH (JE)

PROBLEM:

In some cases, after deleting the first line on a page, RPGESP cannot access other existing lines on the page. Instead, it responds "[New line]" to an attempt to access any such line.

SOLUTION:

The patch detailed below will correct this problem.

NOTE

There are two versions of this patch: version "A" applies to the BASIC-PLUS-2 source form of RPGESP (installed by RPGGEN.CTL), and version "B" applies to the MACRO-11 source form of RPGESP (installed by RPGNB2.CTL).

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGESP source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: either RPGESP.B2S or RPGESP.MAC. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that any other necessary files (RPGESP.CMD and RPGESP.ODL for the MACRO-11 version) are located in that account.

2. The command files for this patch appear in patch kit version "E" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

A - BASIC-PLUS-2

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGESP.B2S=RPGESP.B2S<cr>
#[logfile=]<cr>
*H/RPGESP/V<cr>
2<tab>!<tab>Program<tab><tab>: RPGESP<cr>
```

RPG II V8.02 Seq 32.8.2 M
for RSTS/E V7
RPGESP V2-05 2 of 4

```
*2AL<cr>
6<tab>!<tab>Edit<tab><tab>: 05<cr>
*G/05/-C/6/V<cr>
6<tab>!<tab>Edit<tab><tab>: 06<cr>
*AL<cr>
7<tab>!<tab>Edit Date<tab>: 08-SEP-78<cr>
*G/08-SEP-78/-9C/18-DEC-78/V<cr>
7<tab>!<tab>Edit Date<tab>: 18-DEC-78<cr>
*H/V2-05/V<cr>
<tab>!<tab>V2-05<tab><tab>08-SEP-78:JLE<tab>LINE CONCATENATION<cr>
*G/ION/I<cr>
 &<cr>
<tab>!<tab>V2-06<tab><tab>18-DEC-78:JLE<tab>FIRST LINE DELETE<esc>*V<cr>
<tab>!<tab>V2-06<tab><tab>18-DEC-78:JLE<tab>FIRST LINE DELETE<cr>
*H/V2-05/V<cr>
1010<tab>ID$="RPGESP V2-05 [RSTS:BP2]" \ ON ERROR GO TO 8000 &<cr>
*-C/6/V<cr>
1010<tab>ID$="RPGESP V2-06 [RSTS:BP2]" \ ON ERROR GO TO 8000 &<cr>
*H/5120<tab>/V<cr>
5120<tab>NOCOPY%=TRUE% \ GOSUB 7000 \ PREV%=BEFORE%(CURR%) \ &<cr>
*9AI<cr>
5130<tab>CURR%=PREV% UNLESS CURR% &<cr>
<tab><tab>! RESET FOR NEW FIRST LINE<cr>
<cr>
<esc>*V<cr>
5180<tab>MSG%=4% \ GOSUB 9000 \ GO TO 4000<tab>! "[DELETED]"<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

B - MACRO-11

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGESP.MAC=RPGESP.MAC<cr>
#[logfile=]<cr>
*H/RPGESP/V<cr>
<tab>.TITLE<tab>RPGESP<cr>
*AL<cr>
<tab>.IDENT<tab>/001000/<cr>
*H/13616/V<cr>
<tab>.WORD<tab>13616<cr>
*-3C/872/V<cr>
<tab>.WORD<tab>13872<cr>
*H/5180,/V<cr>
<tab>.WORD<tab>5180,<tab>L5180<cr>
*0AI<cr>
<tab>.WORD<tab>5130,<tab>L5130<cr>
<esc>*V<cr>
<tab>.WORD<tab>5180,<tab>L5180<cr>
```

```
*H/.BLKW<tab>512/V<cr>
<tab>.BLKW<tab>512<cr>
*-C/0/V<cr>
<tab>.BLKW<tab>510<cr>
*H/V2-05/V<cr>
<tab>MOS$MM<tab>,$PDATA+20<tab>; "RPGESP V2-05 [RSTS:BP2]"<cr>
*-C/6/V<cr>
<tab>MOS$MM<tab>,$PDATA+20<tab>; "RPGESP V2-06 [RSTS:BP2]"<cr>
*H/L5180:/V<cr>
L5180:<tab>LIN$<tab>,5180<tab><tab>; #5180<cr>
*0AI<cr>
L5130:<tab>LIN$<tab>,5130<tab><tab>; #5130<cr>
<tab>TSI$M <tab>,$IDATA+1500<tab>; CURR%<cr>
<tab>BNE$<tab>,T71A<cr>
<tab>MOI$MM<tab>,$IDATA+1494<tab>; PREV%<cr>
<tab><tab> $IDATA+1500<tab>; CURR%<cr>
T71A:<cr>
<esc>*V<cr>
L5180:<tab>LIN$<tab>,5180<tab><tab>; #5180<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGESP program and re-enter it into the system library, type the following RSTS/E commands.

```
A - BASIC-PLUS-2

RUN $BASIC2.TSK<cr>

<BASIC-PLUS-2's header line>


Basic2

OLD RPGESP<cr>

Basic2

HISEG<cr>
Name [??????]--BP2COM<cr>
Account [???]--LB:<cr>

Basic2

COMPILE/OBJ<cr>

Basic2

BUILD/SEQ<cr>

Basic2
```

```
RUN $TKB.TSK<cr>
TKB>@RPGESP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGESP.TSK=RPGESP.TSK<cr>
*=$RPGESP.TSK<232>/RE<cr>
*^Z

Ready
```

B - MACRO-11

```
RUN $MAC.TSK<cr>
MAC>RPGESP=RPGESP<cr>
MAC>^Z

Ready

RUN $TKB.TSK<cr>
TKB>@RPGESP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*=$RPGESP.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the program.

5. The source (.B2S or .MAC) version of the program and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
RPGESP V2-06

Seq 32.8.3 M

VT100 ANSI MODE SUPPORT - MANDATORY RPGESP PATCH (JLE)

PROBLEM:

RPGESP does not support the VT100 terminal operating in ANSI mode.

SOLUTION:

The patch detailed below will implement VT100 ANSI mode cursor control.

As with other terminal types, VT100 ANSI mode can be made the default terminal type for RPGESP by including the statement

```
DEV%=VT100%
```

in line 1120. The type can be set at run time with the /TE[RMINAL] switch:

```
/TE:VT1[??]
```

RPGESP considers a VT100 set in VT52 compatibility mode as a normal VT52 series terminal.

NOTE

There are two versions of this patch: version "A" applies to the BASIC-PLUS-2 source form of RPGESP (installed by RPGGEN.CTL), and version "B" applies to the MACRO-11 source form of RPGESP (installed by RPGNB2.CTL).

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGESP source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: either RPGESP.B2S or RPGESP.MAC. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that any other necessary files (RPGESP.CMD and RPGESP.ODL for the MACRO-11 version) are located in that account.

2. The command files for this patch appear in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

A - BASIC-PLUS-2

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGESP.B2S=RPGESP.B2S<cr>
#[logfile=]<cr>
*H/RPGESP/V<cr>
2<tab>!<tab>Program<tab><tab>: RPGESP<cr>
*2AL<cr>
6<tab>!<tab>Edit<tab><tab>: 06<cr>
*G/06/-C/7/V<cr>
6<tab>!<tab>Edit<tab><tab>: 07<cr>
*AL<cr>
7<tab>!<tab>Edit Date<tab>: 18-DEC-78<cr>
*G/78/-9C/04-JAN-79/V<cr>
7<tab>!<tab>Edit Date<tab>: 04-JAN-79<cr>
*H/11<tab>/V<cr>
11<tab>!<tab>Copyright (C) 1975,77,78,  &<cr>
*G/78/-C/9/V<cr>
11<tab>!<tab>Copyright (C) 1975,77,79,  &<cr>
*H/V2-06/V<cr>
<tab>!<tab>V2-06<tab><tab>18-DEC-78:JLE<tab>FIRST LINE DELETE<cr>
*G/DELETE/I<cr>
 &<cr>
<tab>!<tab>V2-07<tab><tab>04-JAN-79:JLE<tab>VT100 ANSI-MODE SUPPORT<esc>*V<cr>
<tab>!<tab>V2-07<tab><tab>04-JAN-79:JLE<tab>VT100 ANSI-MODE SUPPORT<cr>
*H/V2-06/V<cr>
1010<tab>ID$="RPGESP V2-06 [RSTS:BP2]" \ ON ERROR GO TO 8000 &<cr>
*-C/7/V<cr>
1010<tab>ID$="RPGESP V2-07 [RSTS:BP2]" \ ON ERROR GO TO 8000 &<cr>
*H/1120<tab>/V<cr>
1120<tab>LA30%=K1% \ VT05%=K2% \ VT50%=4% \ &<cr>
*G/4% \/I/ VT100%=8% \/V<cr>
1120<tab>LA30%=K1% \ VT05%=K2% \ VT50%=4% \ VT100%=8% \ &<cr>
*H/2130<tab>S/V<cr>
2130<tab>SW$="TE" \ GOSUB 10000 \ SWVAL$=LEFT(SWVAL$,K3%) \ &<cr>
*4AL<cr>
<tab><tab>IF SWVAL$="VT5" THEN DEV%=VT50% ELSE 1995<cr>
*G/ELSE/I<cr>
 &<cr>
<tab><tab>IF SWVAL$="VT1" THEN DEV%=VT100% ELSE<esc>*V<cr>
<tab><tab>IF SWVAL$="VT1" THEN DEV%=VT100% ELSE 1995<cr>
```

RPG II V8.02 Seq 32.8.3 M
for RSTS/E V7
RPGESP V2-06 3 of 8

```
*H/2160<tab>/V<cr>
2160<tab>GO TO 2000 IF "/"=LEFT(CMD$,K1%) \ &<cr>
*6AL<cr>
<tab>IF A2$="/" OR (A2$=CHR$(128% AND A3$="/")) THEN &<cr>
*G/128%/I/)/G/))/-DV<cr>
<tab>IF A2$="/" OR (A2$=CHR$(128%) AND A3$="/") THEN &<cr>
*8AL<cr>
<tab><tab>! IF CORRECT ID FOR VT50'S, ASSUME VT50.<cr>
*G/VT50./I<cr>
 &<cr>
<tab>ELSE &<cr>
<tab>IF A2$="[" OR (A2$=CHR$(128%) AND A3$="[") THEN &<cr>
<tab><tab>DEV%=VT100%<tab>! SET VT100 ANSI-MODE IF VT100 ID RESPONSE.<esc>*V<cr>
<tab><tab>DEV%=VT100%<tab>! SET VT100 ANSI-MODE IF VT100 ID RESPONSE.<cr>
*H/2180<tab>/V<cr>
2180<tab>IF DEV%=VT50% THEN &<cr>
*AL<cr>
<tab><tab>UP$=ESC$+"A" \ EOL$=ESC$+"K" \ EOS$=ESC$+"J"<cr>
*G/"J"/I<cr>
<cr>
2185<tab>IF DEV%=VT100% THEN &<cr>
<tab><tab>UP$=ESC$+"[A" \ EOL$=ESC$+"[K" \ EOS$=ESC$+"[J" \
 DEV%=VT50%<esc>*V<cr>
<tab><tab>UP$=ESC$+"[A" \ EOL$=ESC$+"[K" \ EOS$=ESC$+"[J" \ DEV%=VT50%<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready


B - MACRO-11

RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGESP.MAC=RPGESP.MAC<cr>
#[logfile=]<cr>
*H/RPGESP/V<cr>
<tab>.TITLE<tab>RPGESP<cr>
*AL<cr>
<tab>.IDENT<tab>/001000/<cr>
*H/13872/V<cr>
<tab>.WORD<tab>13872<cr>
*-4C/4128/V<cr>
<tab>.WORD<tab>14128<cr>
*H/; W%() HEADER/V<cr>
<tab>.WORD<tab>0<tab><tab>; W%() HEADER<cr>
```

RPG II V8.02
  for RSTS/E V7
RPGESP V2-06

Seq 32.8.3 M

4 of 8

```
*3AI<cr>
<tab>.PSECT<tab>$PDATA<cr>
<tab>.WORD<tab>$PDATA+1900<cr>
<tab>.WORD<tab>3<cr>
<tab>.WORD<tab>21590<cr>
<tab>.WORD<tab>49<cr>
<tab>.WORD<tab>$PDATA+1908<cr>
<tab>.WORD<tab>2<cr>
<tab>.WORD<tab>16731<cr>
<tab>.WORD<tab>$PDATA+1914<cr>
<tab>.WORD<tab>2<cr>
<tab>.WORD<tab>19291<cr>
<tab>.WORD<tab>$PDATA+1920<cr>
<tab>.WORD<tab>2<cr>
<tab>.WORD<tab>19035<cr>
<esc>*V<cr>
<tab>.PSECT<tab>$STRNG<cr>
*H/2180,/V<cr>
<tab>.WORD<tab>2180,<tab>L2180<cr>
*AI<cr>
<tab>.WORD<tab>2185,<tab>L2185<cr>
<esc>*V<cr>
<tab>.WORD<tab>2200,<tab>L2200<cr>
*H/.BLKW/V<cr>
<tab>.BLKW<tab>510<cr>
*G/510/-2C/08/V<cr>
<tab>.BLKW<tab>508<cr>
*H/$IDATA+800/V<cr>
<tab>.WORD<tab>$IDATA+800,435<cr>
*G/435/-C/6/V<cr>
<tab>.WORD<tab>$IDATA+800,436<cr>
*H/V2-06/V<cr>
<tab>MOS$MM<tab>,$PDATA+20<tab>; "RPGESP V2-06 [RSTS:BP2]"<cr>
*-C/7/V<cr>
<tab>MOS$MM<tab>,$PDATA+20<tab>; "RPGESP V2-07 [RSTS:BP2]"<cr>
*H/L1120:/V<cr>
L1120:<tab>LIN$<tab>,1120<tab><tab>; #1120<cr>
*6AL<cr>
<tab><tab> $IDATA+1468<tab>; VT50%<cr>
*AI<cr>
<tab>MOI$IM<tab>,8<tab><tab>; #8<cr>
<tab><tab> $IDATA+1670<tab>; VT100%<cr>
<esc>*V<cr>
<tab>MOI$MM<tab>,$IDATA+1468<tab>; VT50%<cr>
*H/L2130:/V<cr>
L2130:<tab>LIN$<tab>,2130<tab><tab>; #2130<cr>
*H/,L1995/V<cr>
<tab>BNE$<tab>,L1995<cr>
```

RPG II V8.02
  for RSTS/E V7
RPGESP V2-06

Seq 32.8.3 M

5 of 8

```
*0AI<cr>
<tab>BNE$<tab>,T11A<cr>
<tab>MOI$MM<tab>,$IDATA+1468<tab>; VT50%<cr>
<tab><tab> $IDATA+1532<tab>; DEV%<cr>
<tab>BRA$<tab>,L2150<cr>
T11A:<tab>RLI$M <tab>,$STRNG+1720<tab>; SWVAL$<cr>
<tab>RLI$M <tab>,$PDATA+1896<tab>; "VT1"<cr>
<tab>CMS$AA<tab><cr>
<esc>*V<cr>
<tab>BNE$<tab>,L1995<cr>
*AL<cr>
<tab>MOI$MM<tab>,$IDATA+1468<tab>; VT50%<cr>
*G/1468/-3C/670/G/VT5/-C/10/V<cr>
<tab>MOI$MM<tab>,$IDATA+1670<tab>; VT100%<cr>
*H/L2160:/V<cr>
L2160:<tab>LIN$<tab>,2160<tab><tab>; #2160<cr>
*H/EFL$/V<cr>
<tab>EFL$<tab><cr>
*2G/; A2$/V<cr>
<tab>RLI$M <tab>,$STRNG+1732<tab>; A2$<cr>
*AI<cr>
<tab>MOI$IS<tab>,128<tab><tab>; #128<cr>
<tab>CHR$<tab><cr>
<tab>CLI$S <tab><cr>
<tab>CMS$AA<tab><cr>
<tab>LEQ$<tab><cr>
<esc>*V<cr>
<tab>RLI$M <tab>,$STRNG+1736<tab>; A3$<cr>
*4AL<cr>
<tab>MOI$IS<tab>,128<tab><tab>; #128<cr>
*KL<cr>
<tab>AND$<tab><cr>
*A4KL<cr>
<tab>IOR$<tab><cr>
*2AV<cr>
<tab>BEQ$<tab>,L2165<cr>
*G/L2165/-5C/T17A/V<cr>
<tab>BEQ$<tab>,T17A<cr>
*3AI<cr>
<tab>BRA$<tab>,L2165<cr>
T17A:<tab>RLI$M <tab>,$STRNG+1732<tab>; A2$<cr>
<tab>RLI$M <tab>,$PDATA+1658<tab>; "["<cr>
<tab>CMS$AA<tab><cr>
<tab>LEQ$<tab><cr>
<tab>RLI$M <tab>,$STRNG+1732<tab>; A2$<cr>
<tab>MOI$IS<tab>,128<tab><tab>; #128<cr>
<tab>CHR$<tab><cr>
<tab>CLI$S <tab><cr>
<tab>CMS$AA<tab><cr>
<tab>LEQ$<tab><cr>
```

```
<tab>RLI$M <tab>,$STRNG+1736<tab>; A3$<cr>
<tab>RLI$M <tab>,$PDATA+1658<tab>; "["<cr>
<tab>CMS$AA<tab><cr>
<tab>LEQ$<tab><cr>
<tab>AND$<tab><cr>
<tab>IOR$<tab><cr>
<tab>TSI$S <tab><cr>
<tab>BEQ$<tab>,L2165<cr>
<tab>MOI$MM<tab>,$IDATA+1670<tab>; VT100%<cr>
<tab><tab> $IDATA+1532<tab>; DEV%<cr>
<esc>*V<cr>
<cr>
*AL<cr>
L2165:<tab>LIN$<tab>,2165<tab><tab>; #2165<cr>
*H/L2180:/V<cr>
L2180:<tab>LIN$<tab>,2180<tab><tab>; #2180<cr>
*H/,L2200/V<cr>
<tab>BNE$<tab>,L2200<cr>
*-3C/185/V<cr>
<tab>BNE$<tab>,L2185<cr>
*14AI<cr>
L2185:<tab>LIN$<tab>,2185<tab><tab>; #2185<cr>
<tab>CMI$MM<tab>,$IDATA+1532<tab>; DEV%<cr>
<tab><tab> $IDATA+1670<tab>; VT100%<cr>
<tab>BNE$<tab>,L2200<cr>
<tab>RLI$M <tab>,$STRNG+1696<tab>; ESC$<cr>
<tab>RLI$M <tab>,$PDATA+1904<tab>; "[A"<cr>
<tab>COS$AA<tab><cr>
<tab>MOS$SM<tab>,$STRNG+1748<tab>; UP$<cr>
<tab>RLI$M <tab>,$STRNG+1696<tab>; ESC$<cr>
<tab>RLI$M <tab>,$PDATA+1910<tab>; "[K"<cr>
<tab>COS$AA<tab><cr>
<tab>MOS$SM<tab>,$STRNG+1740<tab>; EOL$<cr>
<tab>RLI$M <tab>,$STRNG+1696<tab>; ESC$<cr>
<tab>RLI$M <tab>,$PDATA+1916<tab>; "[J"<cr>
<tab>COS$AA<tab><cr>
<tab>MOS$SM<tab>,$STRNG+1752<tab>; EOS$<cr>
<tab>MOI$MM<tab>,$IDATA+1468<tab>; VT50%<cr>
<tab><tab> $IDATA+1532<tab>; DEV%<cr>
<cr>
<esc>*V<cr>
L2200:<tab>LIN$<tab>,2200<tab><tab>; #2200<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGESP program and re-enter it into the system library, type the following RSTS/E commands.

```
A - BASIC-PLUS-2

RUN $BASIC2.TSK<cr>

<BASIC-PLUS-2's header line>


Basic2

OLD RPGESP<cr>

Basic2

HISEG<cr>
Name [??????]--BP2COM<cr>
Account [???]--LB:<cr>

Basic2

COMPILE/OBJ<cr>

Basic2

BUILD/SEQ<cr>

Basic2

RUN $TKB.TSK<cr>
TKB>@RPGESP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGESP.TSK=RPGESP.TSK<cr>
*=$RPGESP.TSK<232>/RE<cr>
*^Z

Ready
```

B - MACRO-11

```
RUN $MAC.TSK<cr>
MAC>RPGESP=RPGESP<cr>
MAC>^Z

Ready

RUN $TKB.TSK<cr>
TKB>@RPGESP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*=$RPGESP.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the program.

5. The source (.B2S or .MAC) version of the program and other files used during the patching procedures should now be removed from the public structure.

RPG II V8.02
for RSTS/E V7
RPGESP V2-07

Seq 32.8.4 M

RELOCATING EXISTING LINE - MANDATORY RPGESP PATCH (JLE)

PROBLEM:

Relocating an existing RPG statement (by changing the statement number) to just before the previous line does not work.

SOLUTION:

The patch detailed below will correct this problem.

NOTE

There are two versions of this patch: version "A" applies to the BASIC-PLUS-2 source form of RPGESP (installed by RPGGEN.CTL), and version "B" applies to the MACRO-11 source form of RPGESP (installed by RPGNB2.CTL).

PROCEDURE:

1. For purposes of the discussion, we will assume that the RPGESP source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: either RPGESP.B2S or RPGESP.MAC. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that any other necessary files (RPGESP.CMD and RPGESP.ODL for the MACRO-11 version) are located in that account.

2. The command files for this patch appear in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

A - BASIC-PLUS-2

```
RUN $CPATCH<cr>
<CPATCH's header line>
```

RPG II V8.02 Seq 32.8.4 M
for RSTS/E V7
RPGESP V2-07 2 of 4

```
File to patch - RPGESP.B2S=RPGESP.B2S<cr>
#[logfile=]<cr>
*H/RPGESP/V<cr>
2<tab>!<tab>Program<tab><tab>: RPGESP<cr>
*2AL<cr>
6<tab>!<tab>Edit<tab><tab>: 07<cr>
*G/07/-C/8/V<cr>
6<tab>!<tab>Edit<tab><tab>: 08<cr>
*AL<cr>
7<tab>!<tab>Edit Date<tab>: 04-JAN-79<cr>
*G/04/-2C/30/V<cr>
7<tab>!<tab>Edit Date<tab>: 30-JAN-79<cr>
*H/V2-07/V<cr>
<tab>!<tab>V2-07<tab><tab>04-JAN-79:JLE<tab>VT100 ANSI-MODE SUPPORT<cr>
*G/SUPPORT/I<cr>
 &<cr>
<tab>!<tab>V2-08<tab><tab>30-JAN-79:JLE<tab>RELOCATE EXISTING LINE<esc>*V<cr>
<tab>!<tab>V2-08<tab><tab>30-JAN-79:JLE<tab>RELOCATE EXISTING LINE<cr>
*H/V2-07/V<cr>
1010<tab>ID$="RPGESP V2-07 [RSTS:BP2]" \ ON ERROR GO TO 8000 &<cr>
*-C/8/V<cr>
1010<tab>ID$="RPGESP V2-08 [RSTS:BP2]" \ ON ERROR GO TO 8000 &<cr>
*H/7025<tab>S/V<cr>
7025<tab>STMT%(PREV%)=STMT% \ &<cr>
*AL<cr>
<tab>IF PREV%=CURR% OR PREV%=AFTER%(CURR%) GO TO 7040 ELSE &<cr>
*G/CURR%/23DV<cr>
<tab>IF PREV%=CURR% GO TO 7040 ELSE &<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

B - MACRO-11

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RPGESP.MAC=RPGESP.MAC<cr>
#[logfile=]<cr>
*H/RPGESP/V<cr>
<tab>.TITLE<tab>RPGESP<cr>
*AL<cr>
<tab>.IDENT<tab>/001000/<cr>
*H/14128/V<cr>
<tab>.WORD<tab>14128<cr>
*-3C/384/V<cr>
<tab>.WORD<tab>14384<cr>
```

RPG II V8.02 Seq 32.8.4 M
for RSTS/E V7
RPGESP V2-07 3 of 4

```
*H/V2-07/V<cr>
<tab>MOS$MM<tab>,$PDATA+20<tab>; "RPGESP V2-07 [RSTS:BP2]"<cr>
*-C/8/V<cr>
<tab>MOS$MM<tab>,$PDATA+20<tab>; "RPGESP V2-08 [RSTS:BP2]"<cr>
*H/L7025:/V<cr>
L7025:<tab>LIN$<tab>,7025<tab><tab>; #7025<cr>
*6AL<cr>
<tab>LEQ$<tab><cr>
*7KV<cr>
<tab>BNE$<tab>,L7040<cr>
*G/BNE/-2C/EQ/V<cr>
<tab>BEQ$<tab>,L7040<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-build the RPGESP program and re-enter it into the system library, type the following RSTS/E commands.

```
A - BASIC-PLUS-2

RUN $BASIC2.TSK<cr>

<BASIC-PLUS-2's header line>


Basic2

OLD RPGESP<cr>

Basic2

HISEG<cr>
Name [??????]--BP2COM<cr>
Account [???]--LB:<cr>

Basic2

COMPILE/OBJ<cr>

Basic2

BUILD/SEQ<cr>

Basic2
```

```
RUN $TKB.TSK<cr>
TKB>@RPGESP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*$RPGESP.TSK=RPGESP.TSK<cr>
*=$RPGESP.TSK<232>/RE<cr>
*^Z

Ready
```

B - MACRO-11

```
RUN $MAC.TSK<cr>
MAC>RPGESP=RPGESP<cr>
MAC>^Z

Ready

RUN $TKB.TSK<cr>
TKB>@RPGESP<cr>
TKB>^Z

Ready

RUN $PIP.SAV<cr>
*=$RPGESP.TSK<232>/RE<cr>
*^Z

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the program.

5. The source (.B2S or .MAC) version of the program and other files used during the patching procedures should now be removed from the public structure.

WISE V1
for RSTS/E V7
ENTIRE PACKAGE

Seq 35.1.1 M

1 of 2

PROTECTED VARIABLE LENGTH FIELDS NOT PROCESSED CORRECTLY (MG)

In WISE V1, users are prohibited from changing the contents of protected fields, i.e. those fields which have a negative starting position in their FLD entry. Users are prohibited from adding information or deleting information from these fields. This can be overridden by using the optional CONTROL/X feature of the UPDATE program.

Recently, two patches have been issued for protected variable length fields. These patches (Seq. 35.2.2 and Seq. 35.2.4) were patches to the UPDATE program. Unfortunately, even with these patches, protected variable length fields are not processed correctly in a large portion of the WISE package. All WISE programs which use the function FNR9%, either the version in the SKLTON program, or a modification of the SKLTON version, will not return the contents of a protected variable length field. The FNR9% function will however produce a return code of 2 which is correct. The string returned as the contents of the protected variable length field is always the first field in the variable length field area. This is a result of FNR9% using the starting position (either positive or negative) instead of using the absolute value of the starting position.

Also, those WISE programs which use the FNW8% function are affected in a similar manner. This function writes a string field, and if the field is a protected variable length field, the function will write the value in the first field in the variable length field area and return the correct code. This is a result of the negative starting location.

While this will not cause an error if the user does not have any variable length fields which are protected, it is important to be aware of this problem. This problem will also affect any user-written applications which were created using the SKLTON functions. In the WISE package, this problem affects the following programs:

* ADLIST	* RGRDE2
* ADYRLY	* ADMTLY
* DFOLST	DAYLS4
DAYLS3	DAYNT2
* AMARR2	* AINACT
* AGRAD	* SCLEAR
* NCLEAR	RPCAR2
RSCHE2	* RCLASS
RCRLS2	REGSTR
* RADMIT	REQ5
* REQ4	* REQ3

(An asterisk (*) indicates that these programs have the SKLTON version of the WISE functions.)

WISE V1
for RSTS/E V7
ENTIRE PACKAGE

Correction Procedure:

This problem can be corrected in the SKLTON version of FNR9% by making the following change to line 25370 (the change is underlined).

```
25370       GO TO 25400 IF S9%(R9%,Q1%)<>0%
 :          C9%=ABS(S9%(R9%,Q0%))
 :          FIELD #A9%, T9%(A9%,Q9%) AS A9$,
                        S9%(T9%(A9%,Q8%),Q1%) AS A9$

 !          IT IS VARIABLE LENGTH, FINISH GETTING AT THE
             FIELD AND THEN RETRIEVE THE CONTENTS.
```

This problem can be corrected in the SKLTON version of FNW8% by making the following change to line 25260 (the change is underlined).

```
25260       C9%=ABS(S9%(R9%,Q0%))
 :          R9%=T9%(A9%,Q8%)
 :          FIELD #A9%, T9%(A9%,Q9%) AS A9$,
                        S9%(R9%,Q1%) AS A9$
 :          A9%=Q0%
```

Note that the changes in these lines are the addition of the absolute value function ABS. A similar patch must be made in modifications of FNR9% and FNW8% used in other WISE programs. Below is an example of how to make the changes in the WISE program SKLTON.BAS using the editor EDIT.BAS. User input is underlined.

```
ED SKLTON.BAS/PATCH
*H/25260/V
25260    C9%=S9%(R9%,Q0%)
*G/=/I/ABS(/G/)/I/)/V
25260    C9%=ABS(S9%(R9%,Q0%))
*H/25370/V
25370    GO TO 25400 IF S9%(R9%,Q1%)<>0%
*AL
:        C9%=S9%(R9%,Q0%)
*G/=/I/ABS(/G/)/I/)/V
:        C9%=ABS(S9%(R9%,Q0%))
*EX
```

WISE V1
for RSTS/E V7
UPDATE

Seq 35.2.1 M

1 of 1

AZX INDEX EXISTENCE FLAG (SPR 11-12275 BR)

Under some circumstances, the AZX index existence flag is not recognized by UPDATE. Thus, when an exit is made from UPDATE, via the "U" command, no index updating occurs.

If SURNAME is the only variable-length field defined in the FLD of a file with an AZX index, the AZX index existence flag is set to zero. As a result, when an exit is made via the "U" command, no index updating occurs.

Inserting the underlined code below corrects the problem.

```
225     WHILE Q9%<F1%(Z%,Z%):
                GOTO 230 IF ABS(F1%(P5%,Z%))=Q9% IF F1%(P5%,Q%)=Z%
                        FOR P5%=Q% TO F1%(Z%,Z%):
                Q9%=Q9%+Q%:
        NEXT:
        GOTO 250 IF F7%=Q%:
        F7%,G7%=Z%:
        GOTO 250
22305   OPEN L$+"UPX" +R$ + "<58>" AS FILE C5%:
        S(Z%)=Z:
        CLOSE C5%:
        NAME L$+"UPX"+R$+"<58>" AS L$+"UPX"+R$+"<60>":
        R8%=R7%:
        GOTO 22300
```

WISE V1
for RSTS/E V7
UPDATE

PROTECTION OF VARIABLE-LENGTH FIELDS (SPR 11-14555 BR)

Variable-length fields with a starting position less than zero are not treated as protected fields by UPDAT2.

The following patch fixes the problem:

```
22200   IF P1%<>W% AND L9% AND P3%<0%
              THEN PRINT E9$;"PROTECTED FIELD - CHANGES NOT ALLOWED"
\       RETURN
!       IF IT A VARIABLE-LENGTH FIELD
22205   G%=Q%
\       H%=V%
\       GOSUB 20200
\       G%=P3%
\       GOSUB 21200
\       PRINT "    ";TS IF P1%
\       RETURN IF P1%=W%
```

WISE V1
for RSTS/E V7
UPDATE

Seq 35.2.3 M

1 of 1

CHANGING CONTENTS OF PROTECTED DATA FIELDS (SPR 11-14792 BR)

The WISE Update series of programs allows the user to change the contents of protected data fields by entering CONTROL/X. The enhancement to limit access to the CONTROL/X feature, found in the WISE BUG/PATCH Manual No. 4 and the WISE Installation Notes, fails if a user enters CONTROL/C instead of a password.

If you are using this enhancement to the update series, implement the following changes:

- Delete Line 5Ø11
- Install the following code:

```
5Ø1Ø    GOTO 5Ø15 IF L9%=Q0%
5Ø14    Z9$=SYS(CHR$(2%))
\       PRINT
\       GOTO 5Ø2Ø
5Ø15    L9%=-1%
```

WISE V1
for RSTS/E V7
UPDATE

PROTECTION OF VARIABLE-LENGTH FIELDS (SPR 11-17436 BR)

The patch for protecting variable-length field (Seq 35.2.2 M), prints an error message when protected-fields are encountered with the add option.

Making the following underlined change will correct the problem.

```
222ØØ      IF P1%<>W% AND L9% AND P3%<Ø%
               THEN PRINT E9$;'PROTECTED FIELD - CHANGES NOT ALLOWED';
                    IF P1%<>Z%
:          PRINT
:          RETURN
!
           PROTECT VARIABLE - LENGTH FIELDS
```

WISE V1
for RSTS/E V6B/V6C
SKLTON

FNQ9% FUNCTION (SPR 11-14375 BR)

The function FNQ9% of SKLTON creates a Field Environment Table (F.E.T.) for each requested information file(s) in the SKLTON DATA Statements. When a program is executed, the current contents of RECORDØ is recorded in the F.E.T. If another user is adding records to the same information file(s), the changes to RECORDØ are not reflected in the first user program.

Inserting the code below in FNG9% will cause a program to update the F.E.T., if the record requested is beyond the current F.E.T. limit.

```
25500   IF V9%>T9%(R9%,Q6%) THEN GET #R9%, RECORD Q1%
\       FIELD #R9%, Q2% AS R9$, Q2% AS R9$
\       T9%(R9%,Q6%)=CVT$%(R9$)-Q1%
```

WISE V1
for RSTS/E V7
REQUES

REQ3 DECODING PROBLEM (SPR 11-16189 BR)

REQ3 will not decode a protected 2 byte code/description field.

Inserting the code below, in REQ3, will correct the problem.

```
11340 GOTO 11280 IF F6%>0% OR T0(I%+1%)<>8% OR I%=T9%
```

WISE V1
for RSTS/E V7
REQUES

FIELDNAME ERROR (SPR 11-16631 BR)

When "FLAG" appears in the fieldname and is not within the first six characters (e.g., "TEAMFLAG") REQ4 prints "ERROR-12" instead of the field contents.

The FNT8% function redefines the fieldname as the first six characters of the fieldname for accessing code and description files. Implementing the code changes below will check the entire fieldname for the characters "FLAG."

```
17630   GOTO 17635 IF INSTR(Q1%,S9$(V1%),"FLAG")=Q0%
\       PRINT #09%, R9%;
\       GOTO 17810
!

        PATCH FOR PRINTING THE CONTENTS OF FLAGGED FIELDS
17785           GOTO 17630 IF INSTR(Q1%,S9$(V1%),"FLAG")<>Q0%
!


        PATCH FOR PRINTING THE CONTENTS OF FLAGGED FIELDS


25365   V1%=R9%
!



        PATCH FOR PRINTING THE CONTENTS OF FLAGGED FIELDS
```

WISE V1
for RSTS/E V7
REQUES

IMPROPER USE OF THE LABEL OPTION (SPR 11-19Ø27 BR)

REQ5 of the REQUES series of programs expects field names in one of the following: TITLE, GIVENNAM, SURNAME, JR, LOCADDR (or) TITLE, GIVENNAM, SURNAME, JR, STREET, CITY, STATE, ZIPCODE (or) TITLE, GIVENNAM, SURNAME, JR, STREET/P, CITY/P, STATE/P, ZIPCOD/P.

Notice that the first and seventh (if present) fields are code and description fields, all others are string fields. Labels defined in any other manner are not supported by REQ5.

WISE V1
for RSTS/E V7
REQ3.BAS

THE FNT 8% FUNCTION IN REQ3 (SPR 11-217Ø4 CR/JG)

The FNT8% function in REQ3 (note that this is not the FNT8% provided in SKLTON) incorrectly decodes the highest value code present in the corresponding .COD file. This problem is the result of incorrect initialization of C9% at line 29115.

To correct the problem, replace (in REQ3)

```
29115   A9% = Q1%
:       C9% = QØ%
```

with

```
29115   A9%, C9% = 1%
```

WISE V1
for RSTS/E V7
RGRADE

Seq 35.5.1 M

1 of 1

RGRADE SERIES OF PROGRAMS DOES NOT CALCULATE TOTCRED (SPR 11-16581 BR)

The RGRADE series of programs does not calculate TOTCRED (total credit) correctly when CREDITHRS (credit hours) are applied to TOTCRED, but not CUMCRED (commulative credit).

Implementing the following changes to RGRDE2, will resolve the problem.

```
8000    A1%=FNR9%(N3$,"CREDITHR")
\       A8=R9
\       A1%=FNR9%("GRADE","CUMCREDF")
\       IF R9$="Y" THEN GOSUB 9000
9000    A1%=FNR9%(E5$,K$(A3%))
\       A6=R9
\       A1%=FNR9%(E5$,K1$(A3%))
\       A7=A6*R9
\       A1%=FNR9%("GRADE","VALUE")
```

WISE V1
for RSTS/E V7
RGRADE

Seq 35.5.2 M

1 of 1

RGRADE SERIES OF PROGRAMS (SPR 11-17861 BR)

The RGRADE series of programs does not change CUMGPA, TOTCRED, etc. fields in the STUDEN file when posting grades for an individual student by SSN.

RGRDE2 gets the student record in an unlocked mode and therefore cannot change any student record fields. Making the underlined code change to RGRDE2 corrects the problem.

```
3904     A1%=FNS9%("STUDEN,SSX",L,"L")
!        GO TO 3907 IF A1%=-12%
!        GO TO 3908
```

WISE V1
for RSTS/E V7
RGRDE2

Seq 35.5.3 M

1 of 1

ALPHABETICAL SEARCH IN RGRDE2 (SPR 11-23182 MG)

STATEMENT

Alphabetical Search in RGRDE2 (by Surname, Givennam) does not work correctly. When retrieving a student by last name, first name, the program does an INPUT instead of an INPUT LINE.

RESPONSE

To correct this problem line 396Ø in RGRDE2.BAS:

```
396Ø INPUT "SURNAME, GIVENNAM"; N9$
     GOTO  399Ø IF N9$=""
```

should be changed to:

```
396Ø PRINT "SURNAME, GIVENNAM";
\    INPUT LINE N9$
\    N9$=LEFT(N9$, LEN(N9$)-2%)
\    GOTO 399Ø IF N9$=""
```

WISE V1
for RSTS/E V7
REGSTR

DIMENSIONAL ARRAYS (SPR 11-17874 BR)

In the program REGSTR BAS at line 28Ø2Ø, two arrays are dimensional:

```
28Ø2Ø DIM S8$ (61%), S8% (61%, 1%)
```

This presents the usage of the maximum number of time fields in the course information file. If attempting to register at this level, an error (SUBSCRIPT OVERFLOW) occurs at line 2Ø65Ø.

To correct the problem change line 28Ø2Ø to read as indicated below:

```
28Ø2Ø     DIM S8$ (76%), S8% (76%, 1%).
```

WISE V1
   for RSTS/E V7
NEWFIL

CREATING UPX (SPR 11-17987 BR)

The WISE software does not provide a means to create a UPX file for those information files that have indices, and data entry is not done via the update series.

Inserting the following code in NEWFIL will create a UPX file for each information file created.

```
115     DIM #5%,S(32767)
850     J%=INSTR(Q1%,F0$,'.')
\       OPEN LEFT(F0$,J%)+'UPX' FOR OUTPUT AS FILE #5%
\       S(0)=0
\       CLOSE 5%
```

WISE V1
for RSTS/E V7
ADLIST

ADLIST TERMINATES ON VALID CLASSYR (SPR 11-23126 MG)

ADLIST Program terminates abnormally if CLASSYR Field has value greater than 2017.

To correct the problem make these patches. These will increase the maximum date to 2059 (that's the maximum for date fields). Also the patches will, on any value greater than 2059, ask the user if he/she desires to continue. The record with the bad CLASSYR is identified by SURNAME, GIVENNAME. If the user continues, the date is changed (only for reporting purposes) to 2059. If the user elects not to continue then the program terminates.

```
ADLIST  11:44 AM        24-Aug-79
1015    OPEN "Y.TMP" AS FILE Q1%
:       Y7%(I%,J%)=Q0% FOR J%=Q0% TO Q4% FOR I%=Q0% TO 169%
:       Y7(I%,J%)=Q0 FOR J%=Q0% TO Q1% FOR I%=Q0% TO 169%

1020    DIM #1%,Y7%(169%,4%),Y7(169%,1%)
:       DIM #2%,C7%(255%,4%),C7(255%,1%)

11520   J$(L7%)=FNR$(A$,"JR")
:       C%(L7%)=FNR%(A$,"CLUB")
:       Y%(L7%)=FNR%(A$,"CLASSYR")
\       IF Y%(L7%)>2059% THEN
                PRINT S$(L7%);",";G$(L7%);" has an invalid class year. Do you"
\               PRINT "wish to continue (if you continue the date will be set"
\               PRINT "to 2059) (Y OR N)";
\               INPUT Y$
\               GO TO 31600 IF Y$<>'Y'
\               Y%(L7%)=2059%

11530   RETURN


Ready
```

INSTALLING WISE V1 ON RSTS/E V7.Ø

To install WISE V1 on RSTS/E V7.Ø, you must use the INWISE.BAS program on Patch Kit "A" of the RSTS/E V7.Ø distribution kit instead of the one on the WISE distribution kit. The PIP command line syntax in the version on the WISE kit is not compatible with PIP.SAV.

INSTALLING DIBOL V4D ON RSTS/E V7.Ø

Prior to the installation of DIBOL V4D on RSTS/E V7.Ø, you must be running under the BASIC-PLUS Run-Time System. If you are not, you must first switch run-time systems. For example,

```
RUN $SWITCH<cr>
Run-Time System to switch to? BASIC<cr>

Ready
```

Various error messages may appear during the task-build of the demonstration program as part of the installation procedure. These messages may be ignored; the demonstration program will execute correctly.

DIBOL-11/DECFORM V4D
for RSTS/E V7
CTSPIP.BAS V04C/4D-16

Seq 36.2.1 M

INDIRECT COMMAND FILE SPECIFICATIONS - MANDATORY PATCH (C.C) - MANDATORY DOCUMENTATION CHANGE (H.U.)

PROBLEM:

1. CTSPIP does not recognize file extensions for Indirect command files.

2. The CTS-500 USER'S GUIDE does not mention the requirement of the /5 switch for indirect command file specifications.

SOLUTION:

The first problem is solved by a patch. The second problem is solved by the attached documentation change.

PATCH PROCEDURE:

To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>
File to patch - CTSPIP.BAS=CTSPIP.BAS
#[logfile=]<cr>
*G\VER/ED\<cr>
*G\4C/4D-16\<cr>
*G\.\<cr>
*V<cr>
<tab>!<tab><tab><tab><tab><tab>FOR RPR02'S.<tab><tab>       &<cr>
*AI<cr>
<tab>!<tab>4C/4D-17<tab>06-NOV-78<tab>RECOGNIZE INDIRECT COMMAND FILE&<cr>
<tab>!<tab><tab><tab><tab><tab>EXTENSIONS.&<cr>
<esc>*<cr>
*H\EDIT$ =\<cr>
*G\16\<cr>
*-2DI\17\V<cr>
<tab>\EDIT$ = '17'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*H\1110<tab>\<cr>
*G\DOT% OR\<cr>
*-2DI\AND\<cr>
*G\<>\<cr>
*-2DI\=\V<cr>
<tab>\DOT% = DOT% AND (MID(S1$, DOT% + 1%, 3%) = '???')<tab><tab>       &<cr>
*EX<cr>
```

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready

OLD CTSPIP

Ready

COMPILE $CTSPIP

Ready

RUN $PIP.SAV<cr>
*=$CTSPIP.BAC<232>/RE
*^Z

Ready
```

Save the command file off line and Delete it and the other files resulting from the patch procedure.

DOCUMENTATION CORRECTION:

CHANGE TO CTS-500 DIBOL USER'S GUIDE (AA-5205B-TC)

On page 9-12 of the manual in Section 9.3.9 "Running from Indirect Command Files", add the following information:

"The indirect command file must be a CTS-500 file." To reflect this change, alter the example on the left margin from:

```
@FILNAM/T
```

to:

```
@FILNAM/5/T
```

Also change the example on the last line of the page from:

```
@KB: <RETURN>
```

to:

```
@KB:/5 <RETURN>
```

DIBOL-11/DECFORM V4D
for RSTS/E V7
CTSPIP

Seq 36.2.2 M

FIX MISSING RECORDS ON PRINTERS - MANDATORY CTSPIP.BAS PATCH (RI)

PROBLEM:
Basic Plus controls some functions of Line Printers by means of specific RECORD statements. Thus explicitly putting RECORD 8% to a Line Printer, for example, causes information pending in that Printer's buffer to be cleared out instead of printed. CTSPIP inadvertently invokes this clear function and consequently loses parts of files which are printed directly to the Line Printer.

SOLUTION:
The following patch corrects the problem.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) is located on the public file structure in the system library account [1,2]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable, the patch command file (PA3602.002) may be created by typing the file name for [logfile] below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
#[logfile]=<cr>
*H/06-NOV-78/V<cr>
<tab>!<tab>4C/4D-17<tab>06-NOV-78<tab>RECOGNIZE INDIRECT COMMAND FILE&<cr>
*AV<cr>
<tab>!<tab><tab><tab><tab><tab>EXTENSIONS.&<cr>
*AI<cr>
<tab>!<tab>4C/4D-18<tab>16-APR-79<tab>FIX MISSING RECORDS ON RT11-TO-&<cr>
<tab>!<tab><tab><tab><tab><tab>  LP: (OR KB:) TRANSFERS       &<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '17'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/17/-2C/18/V<cr>
<tab>\EDIT$ = '18'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*H/21180<tab>/V<cr>
```

```
21180<tab>FNDCLUS% = S1<tab><tab><tab><tab><tab><tab><tab>        &<cr>
*0AI<cr>
21110<tab>S1=0 IF S2%=DEST% AND INSTR(1%,"KBLP",LEFT(SPEC.$(DEST%,DEV%),2%))&<cr>
<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                                    (CTRL/Z to exit)
File to patch - ^Z                                     (CTRL/Z to exit)

Ready
```

3) To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME '$CTSPIP.BAC' AS '$CTSPIP.BAC<232>'<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line and deleted from the public file structure.

DIBOL-11/DECFORM V4D
for RSTS/E V7
CTSPIP

Seq 36.2.3 M

1 of 3

FIX RLØ1,RKØ7 INITIALIZATION - MANDATORY CTSPIP.BAS PATCH (RI)

PROBLEM:
CTSPIP initializes RL01's and RK07's incorrectly.

SOLUTION:
The following patch corrects the problem.

NOTE

This patch also increases the number of directory segments on an initialized RX01 Floppy Diskette from 1 to 4.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) is located on the public file structure in the system library account [1,2]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable, the patch command file (PA362.003) may be created by specifying the file name in [logfile] below.

To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
#[logfile]=<cr>
*H/16-APR-79/V<cr>
<tab>!<tab>4C/4D-18<tab>16-APR-79<tab>FIX MISSING RECORDS ON RT11-TO-&<cr>
*AV<cr>
<tab>!<tab><tab><tab><tab><tab>  LP: (OR KB:) TRANSFERS       &<cr>
*AV<cr>
<tab>!<tab><tab><tab><tab><tab><tab><tab><tab>       &<cr>
*I<cr>
<tab>!<tab>4C/4D-19<tab>19-APR-79<tab>FIX RL01,RK07 INITIALIZATION   &<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '18'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/1/C/9/V<cr>
<tab>\EDIT$ = '19'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
```

DIBOL-11/DECFORM V4D Seq 36.2.3 M
for RSTS/E V7
CTSPIP 2 of 3

```
*H/O P E N/V<cr>
<tab>!<tab>O P E N    R T    D E V I C E<tab><tab><tab><tab>       &<cr>
*H/SYS(DROP$)/V<cr>
<tab><tab>\DUM$ = SYS(DROP$)<tab><tab>! DROP PRIVILEGE.<tab>       &<cr>
*AV<cr>
<cr>
*I<cr>
<tab><tab>\ IF NOT TP.FLG%(RT%) THEN DEV.MAX = 0 &<cr>
<tab><tab>\ DUM$ = SYS(CHR$(12%)) &<cr>
<tab><tab>\ DEV.MAX = FNPOS((ASCII(MID(DUM$,13%,1%)) + &<cr>
<tab><tab><tab>SWAP%(ASCII(MID(DUM$,14%,1%)))) * &<cr>
<tab><tab><tab>ASCII(MID(DUM$,21%,1%))) &<cr>
<cr>
<esc>*H/Z E R O/V<cr>
<tab>!<tab>Z E R O    R T    D E V<tab><tab><tab><tab><tab>       &<cr>
*G/10610/0AL<cr>
10610<tab>DEV.MAX = 4600%<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*5JL<cr>
<tab>DEV.MAX = 4800%<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*KV<cr>
10610<tab>\DEV.MAX = 494% IF FLP.FLG%(RT%)<tab><tab><tab><tab>       &<cr>
*KV<cr>
10610<tab>\DEV.MAX = 27060% IF RK6.FLG%(RT%)<tab><tab><tab><tab>       &<cr>
*KV<cr>
10610<tab>\DEV.MAX = 40000 IF RP2.FLG%(RT%)<tab><tab><tab><tab>       &<cr>
*KV<cr>
10610<tab>\IF DIR.SIZ% > 31% THEN DIR.SIZ% = 31%<tab><tab><tab><tab>       &<cr>
*L<cr>
<tab>\IF DIR.SIZ% > 31% THEN DIR.SIZ% = 31%<tab><tab><tab><tab>       &<cr>
*JDV<cr>
10610<tab>IF DIR.SIZ% > 31% THEN DIR.SIZ% = 31%<tab><tab><tab><tab>       &<cr>
*AL<cr>
<tab><tab>\PRINT 'ALLOCATING MAXIMUM OF 31 DIRECTORY SEGMENTS.'<tab>       &<cr>
*G/10620/0AL<cr>
10620<tab>IF DIR.SIZ% = 0% THEN<tab><tab><tab><tab><tab><tab>       &<cr>
*AV<cr>
<tab><tab>IF FLP.FLG%(RT%) THEN DIR.SIZ% = 1%<tab><tab><tab>       &<cr>
*KV<cr>
<tab><tab>ELSE IF RK6.FLG%(RT%) OR RP2.FLG%(RT%) THEN DIR.SIZ% = 31%     &<cr>
*KV<cr>
<tab><tab>ELSE DIR.SIZ% = 4%<tab><tab><tab><tab><tab>       &<cr>
*KV<cr>
<cr>
*I<cr>
<tab><tab>IF DEV.MAX < 4800 THEN DIR.SIZ% = 4% &<cr>
<tab><tab>ELSE IF DEV.MAX > 10220 THEN DIR.SIZ% = 31% &<cr>
<tab><tab>ELSE DIR.SIZ% = 16% &<cr>
<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                          (CTRL/Z to exit)
File to patch - ^Z                           (CTRL/Z to exit)

Ready
```

3) To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME '$CTSPIP.BAC' AS '$CTSPIP.BAC<232>'<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line, and deleted from the public file structure.

DIBOL-11/DECFORM V4CD
for RSTS/E V7
CTSPIP

FIX SPURIOUS ERROR MESSAGE - MANDATORY CTSPIP PATCH (RI)

PROBLEM:
CTSPIP prints out a spurious error message under certain circumstances if it is unable to transfer a file onto an CTS-300 structured disk.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) resides on the system disk in the library account [1,2]. We shall also assume that the patching procedure will be done from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable the patch command file (PA3602.004) may be created by typing the file name for [logfile] below.

To apply the patch manually, type the following RSTS/E commands.

```
RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
[logfile]=<cr>
*H/19-APR-79/V<cr>
<tab>!<tab>4C/4D-19<tab>19-APR-79<tab>FIX RL01,RK07 INITIALIZATION   &<cr>
*AI<cr>
<tab>!<tab>4C/4D-20<tab>23-APR-79<tab>FIX SPURIOUS ERROR MESSAGE     &<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '19'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/'/2C/20/V<cr>
<tab>\EDIT$ = '20'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*H/4200<tab>!/V<cr>
4200<tab>!<tab><tab><tab><tab><tab><tab><tab><tab>       &<cr>
```

```
*G/IDX3%/I/, NO.MES%/G/0%/DV<cr>
<tab>\TOT.FILS%, TOT.BLKS, IDX%, IDX3%, NO.MES% = 0%<tab><tab><tab>    &<cr>
*H/4280<tab>/V<cr>
4280<tab>IF REAL.PPN% THEN GOSUB 10800 IF FIL.CNT% = 0%<tab><tab><tab> &<cr>
*G/0%/DDI/ UNLESS NO.MES%/V<cr>
4280<tab>IF REAL.PPN% THEN GOSUB 10800 IF FIL.CNT% = 0% UNLESS NO.MES%<tab>&<cr>
*AH/5020<tab>GOTO/V<cr>
5020<tab>GOTO 32700 IF C.FLG% < -1%<tab><tab><tab><tab><tab>       &<cr>
*AI<cr>
<tab>\ NO.MES% = -1% &<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete.
#^Z                                                    (CTRL/Z to exit)
File to patch - ^Z                                     (CTRL/Z to exit)

Ready
```

3) To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME "$CTSPIP.BAC" AS "$CTSPIP.BAC<232>"<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line, and deleted from the public file structure.

DIBOL-11/DECFORM V4D
for RSTS/E V7
CTSPIP

Seq 36.2.5 M

FIX INTEGER ERROR ON RK07 - MANDATORY CTSPIP.BAS PATCH (RI)

PROBLEM:
CTSPIP reports an Integer Error when trying to place a file toward the end of a CTS-300 RK07 disk.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) is located on the system disk in the library account [1,2]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable the patch command file (PA3602.005) may be created by specifying the file name in [logfile] below.

Type the following RSTS/E commands to install the patch manually.

```
RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
*H/23-APR-79/V<cr>
<tab>!<tab>4C/4D-20<tab>23-APR-79<tab>FIX SPURIOUS ERROR MESSAGE     &<cr>
*AV<cr>
<tab>!<tab><tab><tab><tab><tab><tab><tab><tab>       &<cr>
*I<cr>
<tab>!<tab>4C/4D-21<tab>23-APR-79<tab>FIX INTEGER ERRORS ON RK07'S   &<cr>
<tab>!<tab><tab><tab><tab><tab>  AND LARGE DISKS<tab>       &<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '20'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/2/C/1/V<cr>
<tab>\EDIT$ = '21'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
```

```
*H/21180<tab>FNDCLUS%/V<cr>
21180<tab>FNDCLUS% = S1<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/S1/-2DI/FNNEG%(S1)/V<cr>
21180<tab>FNDCLUS% = FNNEG%(S1)<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*DV<cr>
21180<tab>FNDCLUS% = FNNEG%(S1)<tab><tab><tab><tab><tab><tab>       &<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                                    (CTRL/Z to exit)
File to patch - ^Z                                     (CTRL/Z to exit)

Ready
```

3) To re-compile and re-enter the program into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME "$CTSPIP.BAC" AS "$CTSPIP.BAC<232>"<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line and deleted from the public file structure.

ERRONEOUS OUTPUT DEVICE SPEC MESSAGE FOR INDIRECT COMMAND FILES - MANDATORY CTSPIP.BAS PATCH (RI)

PROBLEM:
CTSPIP prints out an erroneous error message ("NO OUTPUT DEVICE SPEC ALLOWED") when using indirect command files.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) is located on the system disk in the library account [1,2]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable the patch command file (PA3602.006) may be created by specifying the file name in [logfile] below.

   Type the following RSTS/E commands to apply the patch manually.

```
RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
#[logfile]=<cr>
*H/4D-21/V<cr>
<tab>!<tab>4C/4D-21<tab>23-APR-79<tab>FIX INTEGER ERRORS ON RK07'S   &<cr>
*2AI<cr>
<tab>!<tab>4C/4D-22<tab>15-MAY-79<tab>NO OUTPUT SPEC ERROR IN IN-   &<cr>
<tab>!<tab><tab><tab><tab><tab> DIRECT COMMAND FILE<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '21'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/21/-C/2/V<cr>
<tab>\EDIT$ = '22'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*H/15020<tab>/H/IBRK%/0AL<cr>
<tab><tab>ELSE IF (FC.FLG% AND IBRK% <> 0%) THEN<tab><tab><tab>       &<cr>
*I/!/AI/!/EX<cr>
```

3) To re-compile and re-enter the program into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME '$CTSPIP.BAC' AS '$CTSPIP.BAC<232>'<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line and deleted from the public file structure.

DIBOL-11/DECFORM V4D
for RSTS/E V7
PUTCM EXTERNAL UTILITY SUBROUTINE

Seq 36.5.5 M

1 of 1

MAXIMUM LENGTH ARGUMENTS

PROBLEM:

PUTCM subroutine allows only 87. bytes to be passed in the argument instead of 127.

SOLUTION:

Apply the following patch.

PATCH PROCEDURE:

Create the following command file for $PBUILD. Instructions for using $PBUILD are included in the RSTS/E V06C SYSTEM GENERATION MANUAL. AA-2669-TC

```
! DIBOL/DECFORM 4D
! Patch for PUTCM modules in both 4C and 4D libraries
! Allows 127. bytes instead of 87.
$FORCE
RUN $LBR.TSK
PUTCM.OLD=$DIBOLR/EX:PUTCM
^Z
RUN $PIP.SAV
PUTCM.COR=KB:
      .TITLE  PUTCM
      .IDENT  /4.01/
      .CSECT  $PUTCM

$PC=.
.=$PC+22
      .WORD   177
.=$PC+52
      .WORD   460+177
      .END
^Z
^Z
RUN $MAC.TSK
PUTCM.PAT=PUTCM.COR
^Z
RUN $PAT.TSK
PUTCM.OBJ=PUTCM.OLD/CS:120142,PUTCM.PAT/CS:7233
^Z
RUN $LBR.TSK
$DIBOLR/RP=PUTCM
^Z
RUN $PIP.SAV
PUTCM.COR,PUTCM.PAT,PUTCM.OLD,PUTCM.OBJ/DE
^Z
$END
```

DIBOL-11/DECFORM V4D
for RSTS/E V7
DIBOLR V4D-00

READ AFTER WRITE ON RELATIVE FILES - MANDATORY RUNTIME SYSTEM PATCH (ES)

PROBLEM:

DIBOLR does not update the record number properly on relative files when a READ fails or a READS is executed. A subsequent WRITE statement then fails.

SOLUTION:

The following patch procedure corrects the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOLR Runtime System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOLR.RTS If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that all other necessary files are located in that account.

2. The command file for this patch appears in patch kit version F or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOLR.RTS
Base address? $DEFEX
Offset address? 7305
 Base   Offset  Old     New?
143512  007305     040  ? 101
143512  007306     040  ? ^Z
Offset address? ^Z
Base address? $UNLOK
Offset address? 6
 Base   Offset  Old     New?
165336  000006  001252  ? ^Z
Offset address? ^Z
Base address? $INPT
Offset address? 3514
 Base   Offset  Old     New?
161646  003514  012746  ? 4737
161646  003516  000001  ? START$+0
161646  003520  010605  ? ^Z
```

```
Offset address? 3636
 Base   Offset  Old     New?
161646  003636  012746  ? 4737
161646  003640  000001  ? START$+0
161646  003642  010605  ? ^Z
Offset address? ^Z
Base address? START$
Offset address? 0
 Base   Offset  Old     New?
140000  000000  000000  ? 105762
140000  000002  000000  ? 3
140000  000004  000000  ? 3014
140000  000006  000000  ? 16605
140000  000010  000000  ? 2
140000  000012  000000  ? 16500
140000  000014  000000  ? 34
140000  000016  000000  ? 1407
140000  000020  000000  ? 5001
140000  000022  000000  ? 156501
140000  000024  000000  ? 21
140000  000026  000000  ? 4737
140000  000030  000000  ? $DEALO
140000  000032  000000  ? 5065
140000  000034  000000  ? 34
140000  000036  000000  ? 11646
140000  000040  000000  ? 12766
140000  000042  000000  ? 1
140000  000044  000000  ? 2
140000  000046  000000  ? 207
140000  000050  000000  ? ^Z
Offset address? ^Z
Base address? $INPT
Offset address? 1432
 Base   Offset  Old     New?
161646  001432  016501  ? 4737
161646  001434  000006  ? START$+50
161646  001436  020127  ? ^Z
Offset address? ^Z
```

DIBOL-11/DECFORM V4D
for RSTS/E V7
DIBOLR V4D-00


```
Base address? START$
Offset address? 50
 Base   Offset  Old      New?
140000  000050  000000  ? 105762
140000  000052  000000  ? 3
140000  000054  000000  ? 3017
140000  000056  000000  ? 16500
140000  000060  000000  ? 34
140000  000062  000000  ? 1010
140000  000064  000000  ? 12701
140000  000066  000000  ? 4
140000  000070  000000  ? 4737
140000  000072  000000  ? $ALOCB
140000  000074  000000  ? 10065
140000  000076  000000  ? 34
140000  000100  000000  ? 110165
140000  000102  000000  ? 21
140000  000104  000000  ? 16520
140000  000106  000000  ? 46
140000  000110  000000  ? 16520
140000  000112  000000  ? 50
140000  000114  000000  ? 16501
140000  000116  000000  ? 6
140000  000120  000000  ? 207
140000  000122  000000  ? ^Z
Offset address? ^Z
Base address? $INPT
Offset address? 1630
 Base   Offset  Old      New?
161646  001630  020127  ? 4737
161646  001632  176660  ? START$+122
161646  001634  001714  ? ^Z
Offset address? ^Z
Base address? START$
Offset address? 122
 Base   Offset  Old      New?
140000  000122  000000  ? 2007
140000  000124  000000  ? 105762
140000  000126  000000  ? 3
140000  000130  000000  ? 3004
140000  000132  000000  ? 16500
140000  000134  000000  ? 34
140000  000136  000000  ? 5020
140000  000140  000000  ? 5010
140000  000142  000000  ? 20127
140000  000144  000000  ? 176660
140000  000146  000000  ? 207
140000  000150  000000  ? ^Z
Offset address? ^Z
Base address? ^Z
File to patch? ^Z
Patch from KB:[P,PN]ONLPAT.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. The Runtime System is ready for use. Your programs do not have to be re-task=built or re-compiled. The Runtime System does have to be reloaded:

```
RUN $UTILTY.BAC<cr>
#UNLOAD DIBOLR<cr>
#EXIT<cr>

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DIBOL-11/DECFORM V4D
for RSTS/E V7
DIBOLR V4D-00A

Seq 36.5.7 M

OUT OF MEMORY ERROR - MANDATORY RUNTIME SYSTEM PATCH (FH)

PROBLEM:

On some systems opening any file with mode 'O' generates the fatal error number nine: 'OUT OF MEMORY'.

SOLUTION:

The following patch corrects the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOLR Runtime System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOLR.RTS If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account, and that all other necessary files are located in that account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOLR.RTS
Base address? $DEFEX
Offset address? 7305
 Base   Offset  Old     New?
143512  007305     101  ? 102
143512  007306     040  ? ^Z
Offset address? ^Z
Base address? $INPT
Offset address? 620
 Base   Offset  Old     New?
161646  000620  010062  ? 4737
161646  000622  000012  ? START$+150
161646  000624  004767  ? ^Z
Offset address? ^Z
```

```
Base address? START$
Offset address? 150
 Base   Offset  Old     New?
140000  000150  000000  ? 10062
140000  000152  000000  ? 12
140000  000154  000000  ? 5001
140000  000156  000000  ? 156501
140000  000160  000000  ? 40
140000  000162  000000  ? 207
140000  000164  000000  ? ^Z
Offset address? ^Z
Base address? ^Z
File to patch? ^Z

Patch from KB:[P,PN]ONLPAT.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. The Runtime System is ready for use. Your programs do not have to be re-task=built or re-compiled. The Runtime System does have to be reloaded:

```
RUN $UTILTY.BAC<cr>
 UNLOAD DIBOLR<cr>
 EXIT<cr>

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DIBOL-11/DECFORM V4D
for RSTS/E V7
DIBOLR

Seq 36.5.8 M

1 of 2

ADDITIONAL OUT OF MEMORY ERRORS - MANDATORY DIBOLR PATCH (FH)

PROBLEM:
Additional problems have been discovered in which a DIBOL program which repeatedly opens and closes Sequential files in either O or I mode will eventually grow in size until an 'Out of Memory' error occurs.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the DIBOLR Runtime System currently resides on the system public file structure in the library account 'LB:' ([0,1]). If this is not the case, any reference to the library account must be changed to reflect the file's location. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in Autopatch Kit version 'G' or later. If this distribution is unavailable, the command file may be created by specifying the file name (PA3605.008) in [logfile] below.

Type the following RSTS/E commands to apply the patch manually.

```
RUN $ONLPAT<cr>
Command file name? [logfile]=<cr>
File to patch? [0,1]DIBOLR.RTS
Base address? $DEFEX
Offset address? 7305
 Base   Offset  Old     New?
143512  007305     102  ? 103
143512  007306     040  ? ^Z
Offset address? ^Z
Base address? START$
Offset address? 162
 Base   Offset  Old     New?
140000  000162  000207  ? 110160
140000  000164  000000  ? 40
140000  000166  000000  ? 207
140000  000170  000000  ? ^Z
Offset address? ^Z
```

```
Base address? $INPT
Offset address? 4316
 Base   Offset  Old     New?
161646  004316  116401  ? 4737
161646  004320  000061  ? START$+170
161646  004322  004767  ? ^Z
Offset address? ^Z
Base address? START$
Offset address? 170
 Base   Offset  Old     New?
140000  000170  000000  ? 5001
140000  000172  000000  ? 156401
140000  000174  000000  ? 61
140000  000176  000000  ? 1005
140000  000200  000000  ? 16200
140000  000202  000000  ? 12
140000  000204  000000  ? 5001
140000  000206  000000  ? 156001
140000  000210  000000  ? 40
140000  000212  000000  ? 207
140000  000214  000000  ? ^Z
Offset address? ^Z
Base address? ^Z
File to patch? ^Z
Patch from KB:[P,PN]ONLPAT.CMD complete
#^Z
File to patch - ^Z

Ready
```

3) The Runtime System should now be re-loaded as follows:

```
RUN $UTILTY<cr>
#UNLOAD DIBOLR<cr>
#^Z

Ready
```

4 The command file should now be safely stored off-line and removed from the public file structure. The patch is now complete - programs do NOT need to be re-compiled or re-task=built.

DIBOL-11/DECFORM V4D
for RSTS/E V7
DIBOLR

Seq 36.5.9 M

CLOSE FAILS AFTER BAD OPEN - MANDATORY DIBOLR PATCH (RI)

PROBLEM:

A DIBOL program which uses an illegal file specification in an OPEN statement will fail when that channel is CLOSEd with an "ERROR - RETURN WITHOUT CALL" error message on the CLOSE. This error cannot occur, of course, if the OPEN is not error-trapped, since a fatal error message would appear at the bad OPEN and the bad CLOSE would not be attempted.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the file to patch (DIBOLR.RTS) currently resides on the public file structure in the library account [0,1]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The patching procedure differs slightly depending on whether or not the original version of the patch is installed in your DIBOLR Runtime system. If the patch published in the September RSTS/E Software Dispatch in sequence 36.5.9 M is not currently installed in your DIBOLR Runtime system, then begin with the patching procedure in section 4 below. If, however, the version of the patch which was published in September has been installed in your DIBOLR Runtime system, start with the patch procedure in section 3 below, and then proceed to the procedure in section 4.

3) Install the following patch if the original patch described in the September RSTS/E Software Dispatch for 36.5.9 M has been installed in your DIBOLR Runtime system.

```
RUN $ONLPAT<cr>
Command file name? <cr>
File to patch? [0,1]DIBOLR.RTS
Base address? $DEFEX
Offset address? 7305
 Base   Offset  Old     New?
143512  007305     104  ? 103
143512  007306     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                              (CTRL/Z for new base)
Base address? $INPT
Offset address? 3662
 Base   Offset  Old     New?
161646  003662  001413  ? 1412
161646  003664  016266  ? ^Z                    (CTRL/Z for new offset)
Offset address? 3710
 Base   Offset  Old     New?
161646  003710  012605  ? 4767
161646  003712  004767  ? 266
161646  003714  000264  ? 12605
161646  003716  000207  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^C                              (UP-ARROW/C to stop)
Patch complete
1 patch installed

Command file name? ^Z                           (CTRL/Z to exit)
```

4) The command file for this patch appears in Autopatch Kit Version "G" or later. If this distribution is unavailable, the command file may be created by typing its file name (PA3605.009) in for [logfile] below.

   Type the following RSTS/E commands to install the patch manually.

```
RUN $ONLPAT<cr>
Command filename? [logfile]=<cr>
File to patch? [0,1]DIBOLR.RTS
Base address? $DEFEX
Offset address? 7305
 Base   Offset  Old     New?
143512  007305     103  ? 104
143512  007306     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                              (CTRL/Z for new base)
Base address? $INPT
```

```
Offset address? 3622
 Base   Offset  Old     New?
161646  003622  005762  ? 10546
161646  003624  000012  ? 5762
161646  003626  001413  ? 12
161646  003630  010546  ? 1412
161646  003632  016246  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^C                             (UP-ARROW/C to end)
Patch complete.
1 patch installed

Command filename? ^Z                           (CTRL/Z to exit)
```

5) Now re-install the corrected DIBOLR Runtime system as follows:

```
RUN $UTILTY<cr>
<UTILTY's Header Line>
#UNLOAD DIBOLR<cr>
#^Z                                            (CTRL/Z to exit)
```

6) The patch is complete. Now store the command file safely offline and delete it from the public file structure as follows:

```
RUN $PIP.SAV<cr>
*PA3605.009/DE<cr>
*^Z                                            (CTRL/Z to exit)
```

DIBOL-11/DECFORM V4D
for RSTS/E V7
DECFORM

Seq 36.6.4 M

DATA ENTRY FOR OTHER PROGRAMS GIVES BAD MESSAGE - MANDATORY DECFORM PATCH (GH)

PROBLEM:

If you do data entry using DECFORM for other programs, either in COBOL, BASIC-PLUS-2, or DIBOL, using the supplied linkage routines GTFORM and XLINK, you will get an erroneous "IS SCREEN OK?" message at the beginning of the form.

SOLUTION:

Installing the corrected module detailed below into the System Library will correct the problem. The command file for this patch appears in patch kit version "F" or later.

PROCEDURE:

1. Build the following DIBOL-11 source file using an editor and name it: DECF1R.DBL.

```
        SUBROUTINE DECF1R
ERRNO,  D
        COMMON
CHAR,   A1
VALUE,  D3
SHIFT,  D2
EROR,   A32
DISP1,  A6
DISP2,  A4
NOSCM,  D1
        RECORD
MSG,    A13,'KEY TOO BIG'
,       A13,'FILE IS FULL'
,       A13,'RECORD IN USE'
,       A13,'NO SUCH KEY'
,       A13,'NO DUP KEYS'
,       A13,'FILE OVERFLOW'
,       A13,'ILLEGAL KEY'
,       A13,'IS RECORD OK?'
,       A13,'OK TO DELETE?'
,       A13,'IS KEY OK?'
,       A13,'IS SCREEN OK?'
,       A13,'BAD CHARACTER'
,       A13,'BAD TERMINAL '
```

```
        PROC

              IF(ERRNO.EQ.0) GOTO TYP
              IF(ERRNO.EQ.1) GOTO TYPM1
              SHIFT=ERRNO
              IF(SHIFT.LT.0) SHIFT=-SHIFT
              IF(SHIFT.NE.11) GOTO TYPIT
              IF(NOSCM.EQ.0) GOTO TYPIT
              CHAR='Y'
              XCALL DECML (CHAR,VALUE)
              NOSCM=
              RETURN
        TYPIT,
              EROR=MSG(SHIFT)
        TYP,  DISPLAY (1,DISP1,EROR)
        TYPM1, XCALL FLAGS ('01101000')        ;TURN OFF L.C.
              ACCEPT (1,CHAR)
              XCALL FLAGS ('01101010')         ;TURN ON L.C.
              XCALL DECML (CHAR,VALUE)
              DISPLAY (1,DISP2,27,'K')
              IF(ERRNO.LT.0.AND.VALUE.NE.127) GOTO TYP
              RETURN
              END
```

2. Compile the DIBOL-11 source file as follows:

```
RUN $DICOMP.TSK
*DECF1R=DECF1R/W

    NO  ERRORS DETECTED
*^Z                                              (CTRL/Z to exit)
```

3. Replace the corrected module in the library and set its protection code:

```
RUN $PIP.SAV
*SY:$=DECF1R.OBJ
*SY:$DECF1R.OBJ<40>/RE
*^Z                                              (CTRL/Z to exit)
```

4. It is necessary to re-build your DECFORM forms in order to incorporate this correction.

DIBOL-11/DECFORM V4D
for RSTS/E V7
DECFORM

Seq 36.6.5 F

ERRORS IN THE GTFORM DATA ENTRY SUBROUTINE - DECFORM PATCH (GH)

PROBLEM:

The data entry subroutine GTFORM that has been provided with DECFORM will have a few problems when used with only three arguments or under certain error conditions.

SOLUTION:

Installing the patch detailed below into the GTFORM.OBJ object module will correct the problems. The command file for this patch appears in patch kit version "F" or later.

PROCEDURE:

1. Build the following correction file using an editor and name it: GTFORM.COR.

```
        .TITLE  GTFORM
        .IDENT  "06C04A"
        .PSECT  GTFORM
$PC=.
.=$PC+26
        JMP     PAT1
.=$PC+220
        CALL    PAT2
.=$PC+446
        BNE     70$
        NOP
.=$PC+500
70$:
.=$PC+516
        TSTB    @#402
.=$PC+574
DATA:
.=$PC+616
RCVRID:         .BLKB   6
PAT1:   MOVB    @#402,(R4)
        CLRB    RCVRID
        RETURN
PAT2:   TST     R3
        BNE     10$
        TST     (SP)+
        RETURN
10$:    MOV     (R5)+,DATA
        RETURN
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>GTFORM.PAT=GTFORM.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Copy the original module from the library as follows:

```
RUN $PIP.SAV
*GTFORM.OLD=SY:$GTFORM.OBJ
*^Z                                             (CTRL/Z to exit)
```

4. Run the patch utility to merge the correction into the old module:

```
RUN $PAT.TSK
PAT>GTFORM=GTFORM.OLD/CS:102356,GTFORM.PAT/CS:017103
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library and set its protection code:

```
RUN $PIP.SAV
*SY:$=GTFORM.OBJ
*SY:$GTFORM.OBJ<40>/RE
*^Z                                             (CTRL/Z to exit)
```

6. It is necessary to re-task build your BASIC-PLUS-2 or COBOL programs in order to incorporate this correction. It is not necessary to re-compile.

DIBOL-11/DECFORM V4D
for RSTS/E V7
DECFORM

Seq 36.6.6 M

FORMATS NOT CLEARED BETWEEN MODE CHANGES - MANDATORY DECFORM PATCH (RI)

PROBLEM:
Formats are not properly initialized between mode changes in certain circumstances.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the file to be patched (DECF0R.DBL) resides on the public file structure in the library account [1,2]. We shall further assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in Autopatch Kit version "G" or later. If this distribution is unavailable, the command file (PA3606.006) may be created by specifying the file name in [logfile] below.

Type the following RSTS/E commands to install the patch manually.

```
RUN $CPATCH<cr>
<CPATCH's header line>
File to patch - $DECF0R.DBL=$DECF0R.DBL<cr>
#[logfile] =<cr>
*H/SRCH,/AL<cr>
INIT,<tab>XCALL DECFI(5)<tab><tab><tab>;CALL CLRREC<cr>
*I<cr>
<tab>S =<cr>
<esc>*2H/MCHG,/2AL<cr>
<tab>GOTO OKF<tab><tab><tab>;MODE CHANGE WAS ALLOWED<cr>
*I<cr>
<tab>IF (NEWSC) S =<cr>
<esc>*EX<cr>
```

```
#^Z                                          (CTRL/Z to exit)
File to patch - ^Z                           (CTRL/Z to exit)

Ready
```

3) The patched source code should now be safely stored off-line. The temporary files created by this patching procedure should now be deleted as follows:

```
RUN $PIP.SAV<cr>
*$DECF0R.BAK/DE<cr>
*^Z                                          (CTRL/Z to exit)
```

4) Now any forms which utilize Batch Total Registers should be re-built to implement the corrected code.

DIBOL-11/DECFORM V4D
for RSTS/E V7
DECFORM

SUBSCRIPT ERROR WHEN DISPLAYING BATCH TOTALS - MANDATORY DECFORM PATCH (RI)

PROBLEM:

Subroutine DECFH generates a Subscript error whenever the operator tries to display the contents of Batch Total Registers at times other than when the format is ended.

SOLUTION:

The following patch corrects the problem

PROCEDURE:

1) We shall assume that the file to be patched (FOCOMR.MLB) currently resides on the system public file structure in the library account 'LB:' ([0,1]). We shall also assume that the patching procedure below will be done from a privileged account.

2) The command file for this patch appears on Autopatch Kit Version G or later. If this distribution is unavailable, the command file may be created by substituting its name (PA3606.007) for '[logfile]' below.

   Type the following commands to install the patch manually.

3) Extract the module to be patched as follows:

```
RUN $LBR.TSK<cr>
LBR>MS17.OLD=LB:FOCOMR.MLB/EX:MS17
LBR>^Z                                          (CTRL/Z to exit)
```

4) Create a new version of the module which is compatable with CPATCH.

```
RUN $PIP.SAV<cr>
*MS17.COR=MS17.OLD/RMS<cr>
*^Z                                          (CTRL/Z to exit)
```

5) Edit the correction file as follows:

```
RUN $CPATCH<cr>
File to patch - MS17.COR=MS17.COR<cr>
#[logfile]=<cr>
*H/VAL1,/G/D3/I/,<tab>001/V<cr>
VAL1,<tab>D3,<tab>001<cr>
*H/FN0,/0AI<cr>
<tab>DISPLAY (CHAN,LPBTR(1,18+VAL1))<cr>
<esc>*EX<cr>
```

6) Replace the corrected module into the library as follows:

```
RUN $LBR.TSK<cr>
LBR>LB:FOCOMR.MLB/RP=MS17.COR<cr>

Module  "MS17   " Replaced
LBR>^Z                                       (CRTL/Z to end)
```

7) The patch file should now be safely stored off-line and deleted along with other files created by the patching procedure as follows:

```
RUN $PIP.SAV<cr>
*MS17.OLD,MS17.COR,PA3606.007/DE
*^Z                                          (CTRL/Z to end)
```

8) Now run FOCOMR and re-build any forms which use Batch Total Registers.

DIBOL-11/DECFORM V4D
for RSTS/E V7
DECFORM

Seq 36.6.8 M

1 of 3

FILE VALIDATION SUBSCRIPT ERRORS - MANDATORY DECFORM PATCH (RI)

PROBLEM:

The File Validation Option will fail with an "ERR 7 SUBSCRIPT ERROR" if a full RSTS/E file specification (including the Project Programmer Number) is given for the file name.

SOLUTION:

The patch detailed below corrects the problem.

NOTE

As indicated in the DECFORM Users Guide (AA-5792C-TC) on page 2-37, a RSTS/E file specification must appear in the following form:

dev:[P,PN]filnam.ext

Thus any device specification must preceed the [P,PN], and the [P,PN] must preceed the filnam and also must be enclosed within square brackets '[]'.

PROCEDURE:

1) We shall assume that the file to be patched (FOCOMR.RTS) resides on the public file structure in system library account [0,1]. If this is not the case all references to FOCOMR must be changed to reflect the specific system needs. We shall further assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears on Autopatch Kit Version "G" or later. If this distribution is unavailable, the command file may be created by typing the file name (PA3606.008) for [logfile] below.

Type the following RSTS/E commands to install the patch manually.

DIBOL-11/DECFORM V4D
    for RSTS/E V7
DECFORM

Seq 36.6.8 M

2 of 3

```
RUN [1,2]ONLPAT.SAV<cr>
Command File - [logfile]=<cr>
File to patch? [0,1]FOCOMR.RTS
Base address? 136170
Offset address? 6006
 Base   Offset  Old     New?
136170  006006  151102  ? 143600
136170  006010  124427  ? 240
136170  006012  000054  ? 240
136170  006014  001373  ? 240
136170  006016  004767  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new address)
Base address? 157320
Offset address? 102
 Base   Offset  Old     New?
157320  000102  001534  ? 130354
157320  000104  004767  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new address)
Base address? 110000
Offset address? 0
 Base   Offset  Old     New?
110000  000000  000000  ? 4767
110000  000002  000000  ? 14
110000  000004  000000  ? 4767
110000  000006  000000  ? 5272
110000  000010  000000  ? 124427
110000  000012  000000  ? 54
110000  000014  000000  ? 1373
110000  000016  000000  ? 207
110000  000020  000000  ? 10446
110000  000022  000000  ? 4767
110000  000024  000000  ? 5254
110000  000026  000000  ? 124427
110000  000030  000000  ? 72
110000  000032  000000  ? 1404
110000  000034  000000  ? 121427
110000  000036  000000  ? 54
110000  000040  000000  ? 1370
110000  000042  000000  ? 11604
110000  000044  000000  ? 4767
110000  000046  000000  ? 5232
110000  000050  000000  ? 124427
110000  000052  000000  ? 133
110000  000054  000000  ? 1005
110000  000056  000000  ? 4767
110000  000060  000000  ? 5220
110000  000062  000000  ? 124427
```

```
DIBOL-11/DECFORM V4D                                    Seq 36.6.8 M
    for RSTS/E V7
DECFORM                                                 3 of 3



110000  000064  000000  ? 135
110000  000066  000000  ? 1373
110000  000070  000000  ? 5726
110000  000072  000000  ? 207
110000  000074  000000  ? ^Z                (CTRL/Z for new offset)
Offset address? ^C                         (UP-ARROW/C to end)
Patch complete
1 patch installed

Command Filename? ^Z                       (CTRL/Z to exit)
```

3) Now install the corrected Runtime system as follows:

```
RUN $UTILTY<cr>
<UTILTY's header line>
#UNLOAD FOCOMR
#^Z                                        (CTRL/Z to exit)
```

4) The patch command file should now be stored off line and deleted from the public file structure as follows:

```
RUN $PIP.SAV<cr>
*PA3606.008/DE
*^Z                                        (CTRL/Z to exit)
```

5) Now re-build any DECFORM programs which use the File Validation Option.

DIBOL-11/DECFORM V4D
for RSTS/E V7
RMS NOTES

FILE EXTENDING UNDER DIBOL V4D - DIBOL V4D RESTRICTION (RI)

RESTRICTION:

DIBOL V4D with RMS-11K V1.5 can extend Sequential files, but cannot extend either Indexed or Relative files.

DISCUSSION:

DIBOL V4D opens Indexed or Relative RMS files for shared reading and writing. RMS-11K V1.5 uses RSTS/E Update mode for this type of file access. Since RSTS/E V6C does not allow files open in Update mode to be extended, DIBOL V4D with RMS-11K V1.5 cannot extend Relative or Indexed files.

There are two workarounds to the problem at present:

1) Allocate enough space when the file is originally created to contain all the records.

2) To extend the file, first create a new, bigger, file using RMSDEF or RMSDFN, then transfer records from the old file to the new file using RMSCNV.

DIBOL-11/DECFORM V4D
for RSTS/E V7
DIBOL-11 Language Reference Manual (AA-1760D-TC)

Seq 36.8.1 N
1 of 1

RENAM ARGUMENTS DESCRIBED INCORRECTLY (ES)

Section B.23, page B-43, of the DIBOL-11 Language Reference Manual, Order No. AA-1760D-TC, defines the arguments of the RENAM external subroutine incorrectly. This has been corrected in the recently published new edition of this document with Order No. AA-1760E-TC.

The calling sequence is of the form:

```
XCALL RENAM (ch, filespec1, filespec2)
```

where:

ch is an unused channel number (1-15).

filespec1 is the new file name.

filespec2 is the current file name.

The example at the bottom of the page also needs to be corrected to correspond to this change.

Example:

```
PROC
OPEN(1,O,'TEST')
WRITES(1,'TEST DATA')                ;CREATE A TEST FILE
XCALL RENAM(4,'NEWTST','TEST')       ;RENAME FILE FROM TEST TO
STOP                                 ;NEWTST
END
```

DIBOL-11/DECFORM V4D
for RSTS/E V7
DIBOL-11 LANGUAGE REFERENCE MANUAL

INCORRECT RECV DESCRIPTION

PROBLEM:
The DIBOL-11 Language Reference Manual (AA-1760E-TC) incorrectly describes CTS-500 RECV characteristics on page 3-51 (Pp. 3.5.20). The second statement in the indented paragraph states that "If the length of the message exceeds the size of the field or record, the rightmost characters that caused the overflow are truncated.".

SOLUTION:
The following description should be inserted in its place.

> If the length of the message exceeds the size of the field or record, one of two results will occur depending on the operating system. For CTS-300 users, the rightmost characters that caused the overflow are truncated. For CTS-500 users, the rightmost characters that caused the overflow are saved by the operating system and used as the next message pending for the receiving program. Thus the receiving program will receive the surplus characters the next time a RECV command is issued.

DIBOL-11/DECFORM V4D for RSTS/E V7 — Seq 36.9.1 M
CTS-500 DIBOL USER'S GUIDE AA-5205B-TC — 1 of 2
(These pages replace the current pages 3-19 and 3-20)

CLARIFICATION OF SAMPLE ODL FILE (HU)

Before editing, DBRRMS.ODL would look like this:

```
; *** DBRRMS.ODL ***    V04D-05
; SAMPLE ODL FILE TO BE REFERENCED BY TKB
;
.ROOT   prog-PRGROT-RMSROT-PRGOVR,RMSALL
;
PRGROT: .FCTR   $DIBOLR/LB:orgs:xsubs-$DIBOLR/LB-PRGR01
PROGR01: .FCTR   LB:SYSLIB/LB
;
;       Where 'orgs' are one or more of SEQ,REL, and IDX
;       And 'xsubs' are one or more of the DIBOLR library
;       external subroutines
;
PRGOVR: .FCTR   *(user program overlay structure)
;
;@PRGOVR.ODL
;
; ************************************************
;
; RMS OVERLAY STRUCTURE FOR DIBOL
;
; ************************************************
;
; Use SRN,IDN,SRS,IDS, or IDX here.
@LB:DBRIDN.ODL
;
; ************************************************
;
RMSALL: .FCTR   RMS11-*(RMSFIL,RMSREC)
;
RMSREC: .FCTR   RMSRAB-(RMSCDX,RMSSQ0,DBRREL,DBRIDX)
;
DBRREL: .FCTR   RM0X26
@LB:DBRREL.ODL
;
DBRIDX: .FCTR   RM0X36
@LB:DBRIND.ODL
;
; ************************************************
.END
```

Then, using DBRRMS.ODL as input, create another file by editing. That new file is named PRG in this example, and becomes the input to the Task Builder. The PRG file contains the .ROOT directive, which itself contains five factors:

prog — This is your main program's object file.

PRGROT — These are the portions of your program (task) that should always be resident. One or more of the RMS organization identifier modules IDX, REL, and SEQ are specified here. These modules reside in the CTS-500 System Library, as well as in the DIBOLR Run-Time System Library, and tell the Task Builder which pieces of RMS code to link in. (Any DIBOLR subroutines you want resident would also be added here.) SYSLIB is required.

RMSROT — This factor contains the RMS code that must always be resident. RMSROT is defined in the DBR???.ODL file supplied in the DIBOLR kit, and specified below.

PRGOVR — This is the overlaid portions of your program. Its structure follows the one previously described in this chapter. If you do not use overlays in your program, you may omit this factor completely. If you use a large overlay structure, you may want to put it in a separate file; it would then be referenced using the line @PRGOVR.ODL.

RMSALL — This is the RMS co-tree defined later on in this file. It calls factors referenced in DBR???.ODL.

You must specify a DBR???.ODL file, supplying the appropriate three-letter combination from the following list for the type of file you desire. The first two letters of the combination indicate the file organization supported, while the third letter indicates what RMS code is contained in the DIBOLR Run-Time System.

SR = Sequential and relative file organizations only
ID = Indexed files as well as sequential and relative
N = No RMS code in the Run-Time System

For example, using DBRIDN.ODL allows you to use all the RMS file organizations, but the Run-Time System you are using contains no RMS code. (This is the Run-Time System that the kit installs.)

You should edit the RMSREC factor to exclude any file organizations you do not access, also deleting the corresponding factors shown below it in the creation sequence. You must have RMSCDX. RMSSQ0 may be deleted but in most cases you will need it. All the other RMS files called are in LB:. You do not have to edit or create any other files before you begin task building.

DECAL V2
for RSTS/E V7.Ø
QUIZ

Seq 37.2.1 M

QUIZØ1 DOES NOT INTERPRET AUTHOR VARIABLES CORRECTLY - MANDATORY QUIZØ1 PATCH

PROBLEM:

QUIZØ1 does not interpret Author Variables correctly if the Author Variable is the first character of a comment line. For example:

```
C
\A\ + \B\
!
```

SOLUTION:

At line 2Ø21Ø in QUIZØ1, the variable SØ% is not initialized properly (zero) when checking for Author Variables. The patching procedure detailed below corrects this problem.

PROCEDURE:

1. For purposes of this discussion, we will assume that the program to be patched is located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

   We assume the executable version of the program will be stored in the system account referenced by the logical name DECAL:. If this is not the case, replace references to DECAL: in Step 3 below with the appropriate package or library account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - QUIZØ1.BAS=QUIZØ1.BAS<cr>
#[logfile=]<cr>
*H/2Ø21Ø<tab>/V<cr>
2Ø21Ø   S4% = INSTR(W1%, S$, CHR$(11%)) \
*I<cr>
SØ% = WØ% \<lf>
<tab><esc>*V<cr>
        S4% = INSTR(W1%, S$, CHR$(11%)) \
*EX<cr>
Patch from _KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD QUIZØ1<cr>

Ready

COMPILE DECAL:QUIZØ1<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure.

DECAL V2
for RSTS/E V7.Ø
QUIZ

Seq 37.2.2 M

1 of 2

PROBLEMS WITH LESSON REPORTS FEATURE IN DECAL V2 - MANDATORY QUIZØ1 PATCH

PROBLEM:

Several problems exist with the lesson reports feature in DECAL (e.g., data that appeared on a student scores report for a particular lesson generated on one date is omitted from the same report generated on another date).

These problems occur as a result of QUIZØ1 incorrectly maintaining the free block/word pointers. The first free block/word pointer at the start of the file indicates that we have reached the end-of-file and the next free block/word pointer points somewhere else. The second free block/word pointer should also point to the end of the file. Therefore, when attempting to write a record in a block which does not exist, QUIZØ1 incorrectly overwrites records starting at the beginning of the file.

SOLUTION:

The patching procedure detailed below corrects the above problem.

NOTE

The mandatory QUIZØ2 program patch described in article Seq 37.2.3 M must be installed along with this patch.

PROCEDURE:

1. For purposes of this discussion, we will assume that the program to be patched is located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

   We assume the executable version of the program will be stored in the system account referenced by the logical name DECAL:. If this is not the case, replace references to DECAL: in Step 3 below with the appropriate package or library account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - QUIZØ1.BAS=QUIZØ1.BAS<cr>
#[logfile=]<cr>
*H/28Ø<tab>/V<cr>
28Ø     E%(W4%) = 11% \
*5AV<cr>
        GET #W3%, RECORD A1% IF A1% <> W1%
```

```
*G/W1%/I/ AND A2%<>Ø%/V<cr>
        GET #W3%, RECORD A1% IF A1% <> W1% AND A2%<>Ø%
*EX<cr>
Patch from _KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD QUIZØ1<cr>

Ready

COMPILE DECAL:QUIZØ1<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure.

DECAL V2
for RSTS/E V7.Ø
QUIZ

Seq 37.2.3 M

PROBLEMS WITH LESSON REPORTS FEATURE IN DECAL V2 - MANDATORY QUIZØ2 PATCH

PROBLEM:

Several problems exist with the lesson reports feature in DECAL (e.g., data that appeared on a student scores report for a particular lesson generated on one date is omitted from the same report generated on another date).

These problems occur as a result of QUIZØ2 incorrectly maintaining the free block/word pointers. The first free block/word pointer at the start of the file indicates that we have reached the end-of-file and the next free block/word pointer points somewhere else. The second free block/word pointer should also point to the end of the file. Therefore, when attempting to write a record in a block which does not exist, QUIZØ2 incorrectly overwrites records starting at the beginning of the file.

SOLUTION:

The patching procedure detailed below corrects the above problem.

NOTE

> The mandatory QUIZØ1 program patch described in article Seq 37.2.2 M must be installed along with this patch.

PROCEDURE:

1. For purposes of this discussion, we will assume that the program to be patched is located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

   We assume the executable version of the program will be stored in the system account referenced by the logical name DECAL:. If this is not the case, replace references to DECAL: in Step 3 below with the appropriate package or library account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - QUIZØ2.BAS=QUIZØ2.BAS<cr>
#[logfile=]<cr>
*H/2Ø21Ø<tab>/V<cr>
2Ø21Ø   GET #4%, RECORD V2% \
*G/V2%/I/ IF V3%=WØ% AND NOT T9%/V<cr>
2Ø21Ø   GET #4%, RECORD V2% IF V3%=WØ% AND NOT T9% \
```

```
*EX<cr>
Patch from _KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD QUIZØ2<cr>

Ready

COMPILE DECAL:QUIZØ2<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure.

DECAL V2
for RSTS/E V7.Ø
CREATE

END-OF-BLOCK INDICATOR - MANDATORY CREATE AND LEDIT1 PATCH

PROBLEM:

If the end-of-block indicator (the exclamation mark) is followed by a space instead of a carriage return, the line is not recognized as the end of the block.

SOLUTION:

The patching procedure detailed below corrects the above problem in both CREATE and LEDIT1.

PROCEDURE:

1. For purposes of this discussion, we will assume that the programs to be patched are located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

   We assume the executable version of the programs will be stored in the system account referenced by the logical name DECAL:. If this is not the case, replace references to DECAL: in Step 3 below with the appropriate package or library account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch for CREATE manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - CREATE.BAS=CREATE.BAS<cr>
#[logfile=]<cr>
*H/12Ø<tab>/V<cr>
12Ø     P9$ = CHR$(Ø%)+CHR$(1Ø%)+CHR$(12%)+CHR$(13%)+CHR$(27%) \
*G/27%)/C/+' '/V<cr>
12Ø     P9$ = CHR$(Ø%)+CHR$(1Ø%)+CHR$(12%)+CHR$(13%)+CHR$(27%)+' '\
*EX<cr>
Patch from _KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

DECAL V2
for RSTS/E V7.Ø
CREATE

Seq 37.3.1 M

2 of 2

To apply the patch for LEDIT1 manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - LEDIT1.BAS=LEDIT1.BAS<cr>
#[logfile=]<cr>
*H/16Ø<tab>/V<cr>
16Ø     A$ = SYS(CHR$(6%)+CHR$(-7%)) \
*AV<cr>
        P9$ = CHR$(WØ%)+CHR$(1Ø%)+CHR$(12%)+CHR$(13%)+CHR$(27%)
*G/27%)/I/+' '/V<cr>
        P9$ = CHR$(WØ%)+CHR$(1Ø%)+CHR$(12%)+CHR$(13%)+CHR$(27%)+' '
*EX<cr>
Patch from _KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the programs and re-enter them into the system library, type the following RSTS/E commands.

```
OLD CREATE<cr>

Ready

COMPILE DECAL:CREATE<cr>

Ready

OLD LEDIT1<cr>

Ready

COMPILE DECAL:LEDIT1<cr>

Ready
```

4. The person making the changes to the programs should now take whatever steps are necessary, according to installation guidelines, to save the new version of the programs.

5. The source (.BAS) version of the programs should now be removed from the public structure.

DECAL V2
for RSTS/E V7.Ø
CREATE

Seq 37.3.2 M

CREATE AND LEDIT1 ACCEPT NULL COMMANDS - MANDATORY CREATE AND LEDIT1 PATCH

PROBLEM:

CREATE and LEDIT1 accept null commands which cannot be handled later by the QUIZ and LEDIT series of programs.

SOLUTION:

The patching procedure detailed below corrects the above problem in both CREATE and LEDIT1.

PROCEDURE:

1. For purposes of this discussion, we will assume that the programs to be patched are located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

   We assume the executable version of the programs will be stored in the system account referenced by the logical name DECAL:. If this is not the case, replace references to DECAL: in Step 3 below with the appropriate package or library account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch for CREATE manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - CREATE.BAS=CREATE.BAS<cr>
#[logfile=]<cr>
*H/450<tab>/V<cr>
450     PRINT IF C0% = W0% \
*5AI<cr>
<tab>L8% = W1% \<lf>
<esc>*V<cr>
        GO TO 480
*H/880<tab>/V<cr>
880     GOSUB 20100 \
*AI<cr>
<tab>L8% = W0% \<lf>
<esc>*V<cr>
        N% = 13% \
*H/900<tab>/V<cr>
900     INPUT LINE #C0%, A$ \
```

DECAL V2 Seq 37.3.2 M
for RSTS/E V7.0
CREATE 2 of 3

```
*2AI<cr>
<tab>GOSUB 20350 IF A$ = E2$ AND N% = 13% AND L8% = W0% \<lf>
<tab>GOTO 900 IF A$ = E2$ AND N% = 13% AND L8% = W0% \<lf>
<esc>*V<cr>
        GOTO 970 IF A$ = E2$ \
*H/950<tab>/V<cr>
950     GOSUB 20200 IF S$ <> "" \
*2AI<cr>
<tab>L8% = W1% \<lf>
<esc>*V<cr>
        N% = 127% \
*H/20050<tab>/V<cr>
20050   INPUT LINE #C0%, A$ \
*3AI<cr>
<tab>GOSUB 20350 IF A$ = E2$ AND L8% = W0% \<lf>
<tab>GO TO 20050 IF A$ = E2$ AND L8% = W0% \<lf>
<esc>*V<cr>
        GO TO 20060 IF A$ = E2$ \
*3AI<cr>
<tab>L8% = W1% \<lf>
<esc>*V<cr>
        S$ = A$ \
*H/20310<tab>/5AV<cr>
20400 !
*I<cr>
<lf>
<cr>
20350<tab>PRINT 'Illegal response at this time.' \<lf>
<tab>RETURN<lf>
<cr>
<esc>*V<cr>
20400 !
*EX<cr>
Patch from _KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

To apply the patch for LEDIT1 manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - LEDIT1.BAS=LEDIT1.BAS<cr>
#[logfile=]<cr>
*H/1280<tab>/V<cr>
1280    GOSUB 20490 \
*2AI<cr>
<tab>L8% = W0% \<lf>
<esc>*V<cr>
        GOTO 1300
*H/1300<tab>/V<cr>
1300    A$ = FNA7$(FNA8$) \
```

DECAL V2
   for RSTS/E V7.Ø
CREATE

Seq 37.3.2 M

3 of 3

```
*AI<cr>
<tab>GOTO 33ØØ IF A$ = E2$ AND N% = 13% AND L8% = WØ% \<lf>
<esc>*V<cr>
        GOTO 137Ø IF A$ = E2$ \
*H/135Ø<tab>/V<cr>
135Ø    GOSUB 2Ø29Ø IF O$ <> "" \
*3AI<cr>
<tab>L8% = W1% \<lf>
<esc>*V<cr>
        GOTO 13ØØ
*H/321Ø<tab>/2AV<cr>
1ØØØØ   DEF FNA2%(I%) = ASCII(CVT%$(I%))
*I<cr>
<lf>
<cr>
33ØØ<tab>PRINT 'Illegal V-Command.' \<lf>
<tab>PRINT 'V' \<lf>
<tab>GOTO 185Ø<lf>
<cr>
<esc>*V<cr>
1ØØØØ   DEF FNA2%(I%) = ASCII(CVT%$(I%))
*EX<cr>
Patch from _KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the programs and re-enter them into the system library, type the following RSTS/E commands.

```
OLD CREATE<cr>

Ready

COMPILE DECAL:CREATE<cr>

Ready

OLD LEDIT1<cr>

Ready

COMPILE DECAL:LEDIT1<cr>

Ready
```

4. The person making the changes to the programs should now take whatever steps are necessary, according to installation guidelines, to save the new version of the programs.

5. The source (.BAS) version of the programs should now be removed from the public structure.

DECAL V2
for RSTS/E V7.Ø
SORT1

Seq 37.4.1 M

1 of 2

SORT1 GENERATES A FATAL SORT ERROR - MANDATORY SORT1 PATCH

PROBLEM:

The DECAL Statistical aborts with a fatal SORT error.

SORT1 creates a temporary output file on the system disk with a maximum clustersize of 8. If the minimum clustersize of the system disk is greater than 8, SORT1 generates a fatal SORT error.

SOLUTION:

Removing the clustersize from statement 29565, as indicated below, corrects the above problem.

PROCEDURE:

1. For purposes of this discussion, we will assume that the program to be patched is located in your privileged account on the public disk structure. If this is not the case, replace all program references with suitable text according to the requirements of your installation.

   We assume the executable version of the program will be stored in the system account referenced by the logical name DECAL:. If this is not the case, replace references to DECAL: in Step 3 below with the appropriate package or library account.

2. The command file for this patch appears in patch kit version "A" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - SORT1.BAS=SORT1.BAS<cr>
#[logfile=]<cr>
*H/29565<tab>/V<cr>
29565   OPEN P$(V2%/5%) FOR OUTPUT AS FILE P%(V2%+1%)
*2AV<cr>
        CLUSTERSIZE I9%
*KV<cr>
        !OPEN OUTPUT FILES
*EX<cr>
Patch from _KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD SORT1<cr>

Ready

COMPILE DECAL:SORT1<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure.

DIBOL-11/DECFORM V4C
   for RSTS/E V7
CTSPIP.BAS V04C/4D-16

Seq 39.2.1 M

INDIRECT COMMAND FILE SPECIFICATIONS - MANDATORY PATCH (C.C) - MANDATORY DOCUMENTATION CHANGE (H.U.)

PROBLEM:

1. CTSPIP does not recognize file extensions for Indirect command files.

2. The CTS-500 USER'S GUIDE does not mention the requirement of the /5 switch for indirect command file specifications.

SOLUTION:

The first problem is solved by a patch. The second problem is solved by the attached documentation change.

PATCH PROCEDURE:

To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>
File to patch - CTSPIP.BAS=CTSPIP.BAS
#[logfile=]<cr>
*G\VER/ED\<cr>
*G\4C/4D-16\<cr>
*G\.\<cr>
*V<cr>
<tab>!<tab><tab><tab><tab><tab>FOR RPR02'S.<tab><tab>       &<cr>
*AI<cr>
<tab>!<tab>4C/4D-17<tab>06-NOV-78<tab>RECOGNIZE INDIRECT COMMAND FILE&<cr>
<tab>!<tab><tab><tab><tab><tab>EXTENSIONS.&<cr>
<esc>*<cr>
*H\EDIT$ =\<cr>
*G\16\<cr>
*-2DI\17\V<cr>
<tab>\EDIT$ = '17'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*H\1110<tab>\<cr>
*G\DOT% OR\<cr>
*-2DI\AND\<cr>
*G\<>\<cr>
*-2DI\=\V<cr>
<tab>\DOT% = DOT% AND (MID(S1$, DOT% + 1%, 3%) = '???')<tab><tab>       &<cr>
*EX<cr>
```

```
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready

OLD CTSPIP

Ready

COMPILE $CTSPIP

Ready

RUN $PIP.SAV<cr>
*=$CTSPIP.BAC<232>/RE
*^Z

Ready
```

Save the command file off line and Delete it and the other files resulting from the patch procedure.

DOCUMENTATION CORRECTION:

CHANGE TO CTS-500 DIBOL USER'S GUIDE (AA-5205B-TC)

On page 9-12 of the manual in Section 9.3.9 "Running from Indirect Command Files", add the following information:

"The indirect command file must be a CTS-500 file." To reflect this change, alter the example on the left margin from:

```
@FILNAM/T
```

to:

```
@FILNAM/5/T
```

Also change the example on the last line of the page from:

```
@KB: <RETURN>
```

to:

```
@KB:/5 <RETURN>
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
CTSPIP

Seq 39.2.2 M

FIX MISSING RECORDS ON PRINTERS - MANDATORY CTSPIP.BAS PATCH (RI)

PROBLEM:
Basic Plus controls some functions of Line Printers by means of specific RECORD statements. Thus explicitly putting RECORD 8% to a Line Printer, for example, causes information pending in that Printer's buffer to be cleared out instead of printed. CTSPIP inadvertently invokes this clear function and consequently loses parts of files which are printed directly to the Line Printer.

SOLUTION:
The following patch corrects the problem.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) is located on the public file structure in the system library account [1,2]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable, the patch command file (PA3902.002) may be created by typing the file name for [logfile] below.

To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
#[logfile]=<cr>
*H/06-NOV-78/V<cr>
<tab>!<tab>4C/4D-17<tab>06-NOV-78<tab>RECOGNIZE INDIRECT COMMAND FILE&<cr>
*AV<cr>
<tab>!<tab><tab><tab><tab><tab>EXTENSIONS.&<cr>
*AI<cr>
<tab>!<tab>4C/4D-18<tab>16-APR-79<tab>FIX MISSING RECORDS ON RT11-TO-&<cr>
<tab>!<tab><tab><tab><tab><tab>  LP: (OR KB:) TRANSFERS       &<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '17'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/17/-2C/18/V<cr>
<tab>\EDIT$ = '18'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*H/21180<tab>/V<cr>
```

```
21180<tab>FNDCLUS% = S1<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*0AI<cr>
21110<tab>S1=0 IF S2%=DEST% AND INSTR(1%,"KBLP",LEFT(SPEC.$(DEST%,DEV%),2%))&<cr>
<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                                    (CTRL/Z to exit)
File to patch - ^Z                                     (CTRL/Z to exit)

Ready
```

3) To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME '$CTSPIP.BAC' AS '$CTSPIP.BAC<232>'<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line and deleted from the public file structure.

DIBOL-11/DECFORM V4C
for RSTS/E V7
CTSPIP

Seq 39.2.3 M

1 of 3

FIX RL01,RK07 INITIALIZATION - MANDATORY CTSPIP.BAS PATCH (RI)

PROBLEM:
CTSPIP initializes RL01's and RK07's incorrectly.

SOLUTION:
The following patch corrects the problem.

NOTE
This patch also increases the number of directory segments on an initialized RX01 Floppy Diskette from 1 to 4.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) is located on the public file structure in the system library account [1,2]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable, the patch command file (PA3902.003) may be created by specifying the file name in [logfile] below.

To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
#[logfile]=<cr>
*H/16-APR-79/V<cr>
<tab>!<tab>4C/4D-18<tab>16-APR-79<tab>FIX MISSING RECORDS ON RT11-TO-&<cr>
*AV<cr>
<tab>!<tab><tab><tab><tab><tab>  LP: (OR KB:) TRANSFERS       &<cr>
*AV<cr>
<tab>!<tab><tab><tab><tab><tab><tab><tab><tab>       &<cr>
*I<cr>
<tab>!<tab>4C/4D-19<tab>19-APR-79<tab>FIX RL01,RK07 INITIALIZATION   &<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '18'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/1/C/9/V<cr>
<tab>\EDIT$ = '19'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
```

```
*H/O P E N/V<cr>
<tab>!<tab>O P E N    R T    D E V I C E<tab><tab><tab><tab>       &<cr>
*H/SYS(DROP$)/V<cr>
<tab><tab>\DUM$ = SYS(DROP$)<tab><tab>! DROP PRIVILEGE.<tab>       &<cr>
*AV<cr>
<cr>
*I<cr>
<tab><tab>\ IF NOT TP.FLG%(RT%) THEN DEV.MAX = 0 &<cr>
<tab><tab>\ DUM$ = SYS(CHR$(12%)) &<cr>
<tab><tab>\ DEV.MAX = FNPOS((ASCII(MID(DUM$,13%,1%)) + &<cr>
<tab><tab><tab>SWAP%(ASCII(MID(DUM$,14%,1%)))) * &<cr>
<tab><tab><tab>ASCII(MID(DUM$,21%,1%))) &<cr>
<cr>
<esc>*H/Z E R O/V<cr>
<tab>!<tab>Z E R O    R T    D E V<tab><tab><tab><tab><tab>       &<cr>
*G/10610/0AL<cr>
10610<tab>DEV.MAX = 4800%<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*5JL<cr>
<tab>DEV.MAX = 4800%<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*KV<cr>
10610<tab>\DEV.MAX = 494% IF FLP.FLG%(RT%)<tab><tab><tab><tab>       &<cr>
*KV<cr>
10610<tab>\DEV.MAX = 27060% IF RK6.FLG%(RT%)<tab><tab><tab><tab>       &<cr>
*KV<cr>
10610<tab>\DEV.MAX = 40000 IF RP2.FLG%(RT%)<tab><tab><tab><tab>       &<cr>
*KV<cr>
10610<tab>\IF DIR.SIZ% > 31% THEN DIR.SIZ% = 31%<tab><tab><tab><tab>       &<cr>
*L<cr>
<tab>\IF DIR.SIZ% > 31% THEN DIR.SIZ% = 31%<tab><tab><tab><tab>       &<cr>
*JDV<cr>
10610<tab>IF DIR.SIZ% > 31% THEN DIR.SIZ% = 31%<tab><tab><tab><tab>       &<cr>
*AL<cr>
<tab><tab>\PRINT 'ALLOCATING MAXIMUM OF 31 DIRECTORY SEGMENTS.'<tab>       &<cr>
*G/10620/0AL<cr>
10620<tab>IF DIR.SIZ% = 0% THEN<tab><tab><tab><tab><tab><tab>       &<cr>
*AV<cr>
<tab><tab>IF FLP.FLG%(RT%) THEN DIR.SIZ% = 1%<tab><tab><tab>       &<cr>
*KV<cr>
<tab><tab>ELSE IF RK6.FLG%(RT%) OR RP2.FLG%(RT%) THEN DIR.SIZ% = 31%     &<cr>
*KV<cr>
<tab><tab>ELSE DIR.SIZ% = 4%<tab><tab><tab><tab><tab>       &<cr>
*KV<cr>
<cr>
*I<cr>
<tab><tab>IF DEV.MAX < 4800 THEN DIR.SIZ% = 4% &<cr>
<tab><tab>ELSE IF DEV.MAX > 10220 THEN DIR.SIZ% = 31% &<cr>
<tab><tab>ELSE DIR.SIZ% = 16% &<cr>
<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                          (CTRL/Z to exit)
File to patch - ^Z                           (CTRL/Z to exit)

Ready
```

3) To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME '$CTSPIP.BAC' AS '$CTSPIP.BAC<232>'<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line, and deleted from the public file structure.

DIBOL-11/DECFORM V4C
for RSTS/E V7
CTSPIP

FIX SPURIOUS ERROR MESSAGE - MANDATORY CTSPIP PATCH (RI)

PROBLEM:
CTSPIP prints out a spurious error message under certain circumstances if it is unable to transfer a file onto an CTS-300 structured disk.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) resides on the system disk in the library account [1,2]. We shall also assume that the patching procedure will be done from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable the patch command file (PA3902.004) may be created by typing the file name for [logfile] below.

To apply the patch manually, type the following RSTS/E commands.

```
RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
[logfile]=<cr>
*H/19-APR-79/V<cr>
<tab>!<tab>4C/4D-19<tab>19-APR-79<tab>FIX RL01,RK07 INITIALIZATION   &<cr>
*AI<cr>
<tab>!<tab>4C/4D-20<tab>23-APR-79<tab>FIX SPURIOUS ERROR MESSAGE     &<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '19'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/'/2C/2U/V<cr>
<tab>\EDIT$ = '2U'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*H/4200<tab>!/V<cr>
4200<tab>!<tab><tab><tab><tab><tab><tab><tab><tab>       &<cr>
```

```
*G/IDX3%/I/, NO.MES%/G/0%/DV<cr>
<tab>\TOT.FILS%, TOT.BLKS, IDX%, IDX3%, NO.MES% = 0%<tab><tab><tab>       &<cr>
*H/4280<tab>/V<cr>
4280<tab>IF REAL.PPN% THEN GOSUB 10800 IF FIL.CNT% = 0%<tab><tab><tab>    &<cr>
*G/0%/DDI/ UNLESS NO.MES%/V<cr>
4280<tab>IF REAL.PPN% THEN GOSUB 10800 IF FIL.CNT% = 0% UNLESS NO.MES%<tab>&<cr>
*AH/5020<tab>GOTO/V<cr>
5020<tab>GOTO 32700 IF C.FLG% < -1%<tab><tab><tab><tab><tab>       &<cr>
*AI<cr>
<tab>\ NO.MES% = -1% &<cr>
<esc>*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete.
#^Z                                                  (CTRL/Z to exit)
File to patch - ^Z                                   (CTRL/Z to exit)

Ready
```

3) To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME "$CTSPIP.BAC" AS "$CTSPIP.BAC<232>"<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line, and deleted from the public file structure.

DIBOL-11/DECFORM V4C
for RSTS/E V7
CTSPIP

Seq 39.2.5 M

1 of 2

FIX INTEGER ERROR ON RK07 - MANDATORY CTSPIP.BAS PATCH (RI)

PROBLEM:
CTSPIP reports an Integer Error when trying to place a file toward the end of a CTS-300 RK07 disk.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) is located on the system disk in the library account [1,2]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable the patch command file (PA3902.005) may be created by specifying the file name in [logfile] below.

   Type the following RSTS/E commands to install the patch manually.

```
RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
*H/23-APR-79/V<cr>
<tab>!<tab>4C/4D-20<tab>23-APR-79<tab>FIX SPURIOUS ERROR MESSAGE     &<cr>
*AV<cr>
<tab>!<tab><tab><tab><tab><tab><tab><tab><tab>       &<cr>
*I<cr>
<tab>!<tab>4C/4D-21<tab>23-APR-79<tab>FIX INTEGER ERRORS ON RK07'S   &<cr>
<tab>!<tab><tab><tab><tab><tab>  AND LARGE DISKS<tab>       &<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '20'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/2/C/1/V<cr>
<tab>\EDIT$ = '21'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
```

DIBOL-11/DECFORM V4C
   for RSTS/E V7
CTSPIP

Seq 39.2.5 M
2 of 2

```
*H/21180<tab>FNDCLUS%/V<cr>
21180<tab>FNDCLUS% = S1<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/S1/-2DI/FNNEG%(S1)/V<cr>
21180<tab>FNDCLUS% = FNNEG%(S1)<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*DV<cr>
21180<tab>FNDCLUS% = FNNEG%(S1)<tab><tab><tab><tab><tab><tab>       &<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                                  (CTRL/Z to exit)
File to patch - ^Z                                   (CTRL/Z to exit)

Ready
```

3) To re-compile and re-enter the program into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME "$CTSPIP.BAC" AS "$CTSPIP.BAC<232>"<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line and deleted from the public file structure.

DIBOL-11/DECFORM V4C
for RSTS/E V7
CTSPIP

Seq 39.2.6 M

ERRONEOUS OUTPUT DEVICE SPEC MESSAGE FOR INDIRECT COMMAND FILES -
MANDATORY CTSPIP.BAS PATCH (RI)

PROBLEM:
CTSPIP prints out an erroneous error message ("NO OUTPUT DEVICE SPEC ALLOWED") when using indirect command files.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the program to be patched (CTSPIP.BAS) is located on the system disk in the library account [1,2]. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable the patch command file (PA3902.006) may be created by specifying the file name in [logfile] below.

Type the following RSTS/E commands to apply the patch manually.

```
RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $CTSPIP.BAS=$CTSPIP.BAS<cr>
#[logfile]=<cr>
*H/4D-21/V<cr>
<tab>!<tab>4C/4D-21<tab>23-APR-79<tab>FIX INTEGER ERRORS ON RK07'S   &<cr>
*2AI<cr>
<tab>!<tab>4C/4D-22<tab>15-MAY-79<tab>NO OUTPUT SPEC ERROR IN IN-    &<cr>
<tab>!<tab><tab><tab><tab><tab> DIRECT COMMAND FILE<cr>
<esc>*H/EDIT$/V<cr>
<tab>\EDIT$ = '21'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*G/21/-C/2/V<cr>
<tab>\EDIT$ = '22'<tab><tab><tab><tab><tab><tab><tab>       &<cr>
*H/15020<tab>/H/IBRK%/0AL<cr>
<tab><tab>ELSE IF (FC.FLG% AND IBRK% <> 0%) THEN<tab><tab><tab>       &<cr>
*I/!/AI/!/EX<cr>
```

3) To re-compile and re-enter the program into the system library, type the following RSTS/E commands.

```
OLD $CTSPIP<cr>

Ready

COMPILE $CTSPIP.BAC<cr>

Ready

NAME '$CTSPIP.BAC' AS '$CTSPIP.BAC<232>'<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line and deleted from the public file structure.

DIBOL-11/DECFORM V4C
for RSTS/E V7
PUTCM external utility subroutine

Seq 39.5.2 M

1 of 1

MAXIMUM LENGTH ARGUMENTS

MANDATORY PATCH (C.C.)

PROBLEM:

PUTCM subroutine allows only 87. bytes to be passed in the argument instead of 127.

SOLUTION:

Apply the following patch.

PATCH PROCEDURE:

Create the following command file for $PBUILD. Instructions for using $PBUILD are included in the RSTS/E V06C SYSTEM GENERATION MANUAL, AA-2669D-TC.

```
! DIBOL/DECFORM 4C
! Patch for PUTCM modules in both 4C and 4D libraries
! Allows 127. bytes instead of 87.
$FORCE
RUN $LBR.TSK
PUTCM.OLD=$DIBOL/EX:PUTCM
^Z
RUN $PIP.SAV
PUTCM.COR=KB:
        .TITLE  PUTCM
        .IDENT  /4.01/
        .CSECT  $PUTCM

$PC=.
.=$PC+22
        .WORD   177
.=$PC+52
        .WORD   460+177
        .END
^Z
^Z
RUN $MAC.TSK
PUTCM.PAT=PUTCM.COR
^Z
RUN $PAT.TSK
PUTCM.OBJ=PUTCM.OLD/CS:172005,PUTCM.PAT/CS:7233
^Z
RUN $LBR.TSK
$DIBOL/RP=PUTCM
^Z
RUN $PIP.SAV
PUTCM.COR,PUTCM.PAT,PUTCM.OLD,PUTCM.OBJ/DE
^Z
$END
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL.RTS V4C-00

Seq 39.5.3 F

1 of 2

"HANG" PROGRAM ON LINE PRINTER OFF-LINE - DIBOL.RTS PATCH (ES)

PROBLEM:

If a DIBOL program is doing output directly to a line printer, and the printer goes off-line, the DIBOL V4C Run-Time System will return "ERROR 22 - IO ERROR" in response to the next output request. Subsequent requests for output may result in loss or duplication of data.

SOLUTION:

The following patch may OPTIONALLY be installed to prevent the duplication or loss of data under the above conditions. If this patch is installed and the line printer goes off-line, the DIBOL program will "hang," by continually attempting output until the printer is put back on-line or until the job is aborted. If the printer condition is corrected, the DIBOL program will continue execution without loss of output. No modifications to the DIBOL program are required.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOL Run-Time System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOL.RTS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOL.RTS
File found in account [0,1]
Base address? $INPT
Offset address? 4234
 Base   Offset  Old     New?
163604  004234  004767  ? 4737
163604  004236  000144  ? 140000
163604  004240  104004  ? 240
163604  004242  012762  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL.RTS V4C-00


```
Base address? 140000
Offset address? 0
 Base    Offset  Old      New?
140000   000000  000000   ? 4737
140000   000002  000000   ? 170210
140000   000004  000000   ? 122762
140000   000006  000000   ? 6
140000   000010  000000   ? 14
140000   000012  000000   ? 1003
140000   000014  000000   ? 12737
140000   000016  000000   ? 4
140000   000020  000000   ? 456
140000   000022  000000   ? 104004
140000   000024  000000   ? 122737
140000   000026  000000   ? 16
140000   000030  000000   ? 402
140000   000032  000000   ? 1004
140000   000034  000000   ? 122762
140000   000036  000000   ? 6
140000   000040  000000   ? 14
140000   000042  000000   ? 1402
140000   000044  000000   ? 137
140000   000046  000000   ? 170046
140000   000050  000000   ? 10046
140000   000052  000000   ? 12700
140000   000054  000000   ? 442
140000   000056  000000   ? 12710
140000   000060  000000   ? 1
140000   000062  000000   ? 104010
140000   000064  000000   ? 12020
140000   000066  000000   ? 12710
140000   000070  000000   ? 140076
140000   000072  000000   ? 12600
140000   000074  000000   ? 752
140000   000076  000000   ? 0
140000   000100  000000   ? ^C                    (up-arrow/C to exit)
Patch complete
1 patch installed

Command file name? ^Z                            (CTRL/Z to exit)

Ready
```

3. The Run-Time System is ready for use. Your programs do not have to be re-task-built or re-compiled. The Run-Time System does have to be reloaded:

```
RUN $UTILTY
<UTILTY's header line>
#UNLOAD DIBOL
#EXIT

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL.RTS V4C-00

Seq 39.5.4 M

1 of 2

OUT OF MEMORY ON REPEATED OPEN/CLOSE SEQUENCE - MANDATORY DIBOL.RTS PATCH (ES)

PROBLEM:

A DIBOL Error number 9 is generated when enough files are opened and then closed. Buffer space is allocated on the OPEN and then not relinquished when the file is CLOSE'd.

SOLUTION:

The patch detailed below corrects the problem and changes the version to DIBOL VC04-00A.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOL Run-Time System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOL.RTS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOL.RTS
File found in account [0,1]
Base address? $DEFEX
Offset address? 6757
 Base   Offset  Old     New?
140450  006757     040  ? 101
140450  006760     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                              (CTRL/Z for new base)
Base address? $INPT
Offset address? 5662
 Base   Offset  Old     New?
163604  005662  004767  ? 4737
163604  005664  153710  ? 140100
163604  005666  004767  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                              (CTRL/Z for new base)
```

```
Base address? 140000
Offset address? 100
 Base    Offset  Old      New?
140000   000100  000000   ? 6301
140000   000102  000000   ? 137
140000   000104  000000   ? 145402
140000   000106  000000   ? ^C                    (up-arrow/C to exit)
Patch complete
1 patch installed

Command file name? ^Z                            (CTRL/Z to exit)

Ready
```

3. The Run-Time System is ready for use. Your programs do not have to be re-task-built or re-compiled. The Run-Time System does have to be reloaded:

```
RUN $UTILTY
<UTILTY's header line>
#UNLOAD DIBOL
#EXIT

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL.RTS V4C-00A

Seq 39.5.5 M

1 of 2

CHANNEL IN USE ERROR - MANDATORY DIBOL.RTS PATCH (ES)

PROBLEM:

When a DIBOL program attempts to execute an OPEN statement with an illegal file specification (e.g. "FIL.EXT.UH"), Error #17 "Bad File Specification" is generated correctly; but subsequent OPEN statements on that channel will fail with Error #16 "DIBOL Channel In Use."

SOLUTION:

The patch detailed below corrects this problem and changes the version to DIBOL VC04-00B.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOL Run-Time System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOL.RTS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOL.RTS
File found in account [0,1]
Base address? $DEFEX
Offset address? 6757
 Base   Offset  Old     New?
140450  006757     101  ? 102
140450  006760     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
Base address? $INPT
Offset address? 510
 Base   Offset  Old     New?
163604  000510  004767  ? 4737
163604  000512  005264  ? 140106
163604  000514  010466  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
```

```
Base address? 140000
Offset address? 106
 Base    Offset  Old      New?
140000   000106  000000   ? 5002
140000   000110  000000   ? 4737
140000   000112  000000   ? 174124
140000   000114  000000   ? 137
140000   000116  000000   ? 171604
140000   000120  000000   ? ^C                    (up-arrow/C to exit)
Patch complete
1 patch installed

Command file name? ^Z                            (CTRL/Z to exit)

Ready
```

3. The Run-Time System is ready for use. Your programs do not have to be re-task-built or re-compiled. The Run-Time System does have to be reloaded:

```
RUN $UTILTY
<UTILTY's header line>
#UNLOAD DIBOL
#EXIT

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL.RTS V4C-00B

ERROR 67 AFTER DETACH - MANDATORY DIBOL.RTS PATCH (ES)

PROBLEM:

A DETACH statement executed immediately after an XCALL to TNMBR can cause Error 67 "RSTSE Error #18 Illegal SYS Usage."

SOLUTION:

The patch detailed below corrects this problem and changes the version to DIBOL VC04-00C.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DIBOL Run-Time System file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: [0,1]DIBOL.RTS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "F" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $ONLPAT
Command file name? [logfile=]
File to patch? [0,1]DIBOL.RTS
File found in account [0,1]
Base address? $DEFEX
Offset address? 6757
 Base   Offset  Old     New?
140450  006757     102  ? 103
140450  006760     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
Base address? $INPT
Offset address? 6274
 Base   Offset  Old     New?
163604  006274  012700  ? 4737
163604  006276  000406  ? 140120
163604  006300  112710  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new base)
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL.RTS V4C-00B

Seq 39.5.6 M

2 of 2

```
Base address? 140000
Offset address? 120
 Base    Offset  Old      New?
140000   000120  000000   ? 4737
140000   000122  000000   ? 172760
140000   000124  000000   ? 12700
140000   000126  000000   ? 406
140000   000130  000000   ? 207
140000   000132  000000   ? ^C                    (up-arrow/C to exit)
Patch complete
1 patch installed

Command file name? ^Z                            (CTRL/Z to exit)

Ready
```

3. The Run-Time System is ready for use. Your programs do not have to be re-task-built or re-compiled. The Run-Time System does have to be reloaded:

```
RUN $UTILTY
<UTILTY's header line>
#UNLOAD DIBOL
#EXIT

Ready
```

4. The command file and other files used during the patching procedures should now be removed from the public structure.

RCVID FAILS FOR SOME IDs - MANDATORY DIBOL LIBRARY PATCH (RI)

PROBLEM:

The RCVID XCALL allows a DIBOL program to declare itself a Message Receiver and establish a unique Receiver ID. ID's should range from 1 to 6 characters in length; however ID's less than 6 characters currently fail. This causes any program which sends a message to get a 'No Eligible Receiver' error.

SOLUTION:

The following patch corrects the problem.

PROCEDURE:

1) We shall assume that the DIBOL library (DIBOL.OLB) currently resides on the system disk in account [1,2]. Also we shall assume that the patching operation will be performed from a privileged account.

2) The command file for this patch appears in patch kit version "G" or later. If this distribution is unavailable the patch command file (PA3905.007) may be created by specifying the file name in [logfile] below.

   Type the following RSTS/E commands to install the patch by hand.

3) Extract the RCVID module from the DIBOL library as follows:

```
RUN $LBR.TSK<cr>
LBR>RCVID.OLD=$DIBOL/EX:RCVID<cr>
LBR>^Z                                          (CTRL/Z to exit)
```

4) Create the following correction file with an editor and name it RCVID.COR

```
        .TITLE  RCVID
        .IDENT  /4C.02/
        .CSECT  $RCVID
$PC=.
.=$PC+66
        .WORD   0
        .END
```

5) Assemble the patch file as follows:

```
RUN $MAC.TSK<cr>
MAC>RCVID.PAT=RCVID.COR<cr>
MAC>^Z                                          (CTRL/Z to exit)
```

6) Run the patch utiltity to merge the correction into the old module as follows:

```
RUN $PAT.TSK<cr>
PAT>RCVID.OBJ=RCVID.OLD/CS:2652,RCVID.PAT/CS:6613<cr>
PAT>^Z                                          (CTRL/Z to exit)
```

7) Replace the patched module into the DIBOL library as follows:

```
RUN $LBR.TSK<cr>
LBR>$DIBOL/RP=RCVID<cr>
LBR>^Z                                          (CTRL/Z to exit)
```

8) After the correction file has been safely stored, delete the unnecessary patch files as follows:

```
RUN $PIP.SAV<cr>
*RCVID.OLD,RCVID.PAT,RCVID.COR,RCVID.OBJ/DE<cr>
*^Z                                             (CTRL/Z to exit)
```

9) Finally, all programs which utilize the RCVID XCALL should be relinked with the Task Builder to utilize the patched subroutine.

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL

Seq 39.5.8 M

1 of 2

CORRECT I/O STRUCTURE CORRUPTION - MANDATORY DIBOL PATCH (ES)

PROBLEM:
Various errors are resulting from the corruption of certain I/O structures.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the file to be patched (DIBOL.RTS) currently resides on the system public file structure in the library account LB:. We shall further assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in Autopatch Kit Version "G" or later. If this distribution is unavailable, the command file (PA3905.008) may be created by specifying its file name in [logfile] below.

Type the following RSTS/E commands to install the patch manually.

```
RUN $ONLPAT<cr>
Command file name ? [logfile] =<cr>
File to patch? [0,1]DIBOL.RTS
Base address? $DEFEX
Offset address? 6757
 Base   Offset  Old     New?
140450  006757     103  ? 104
140450  006760     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new address)
Base address? $INPT
Offset address? 456
 Base   Offset  Old     New?
163604  000456  006301  ? 10112
163604  000460  004767  ? 6301
163604  000462  160656  ? 4737
163604  000464  010062  ? 145146
163604  000466  000026  ? 10062
```

```
163604  000470  010112  ? 26
163604  000472  000207  ? ^Z                    (CTRL/Z for new offset)
Offset address? 2706
 Base   Offset  Old     New?
163604  002706  012701  ? 4737
163604  002710  000120  ? 164256
163604  002712  004767  ? 240
163604  002714  156424  ? 240
163604  002716  010062  ? 240
163604  002720  000026  ? 240
163604  002722  010112  ? 240
163604  002724  004567  ? ^Z                    (CTRL/Z for new offset)
Offset address? 5662
 Base   Offset  Old     New?
163604  005662  004737  ? 4737
163604  005664  140100  ? 140132
163604  005666  004767  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new address)
Base address? 140000
Offset address? 132
 Base   Offset  Old     New?
140000  000132  000000  ? 16301
140000  000134  000000  ? 40
140000  000136  000000  ? 6301
140000  000140  000000  ? 137
140000  000142  000000  ? 145402
140000  000144  000000  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^C                             (UP-ARROW/C to end)
Patch complete
1 patch installed

Command file name? ^Z                          (CTRL/Z to exit)
```

3) The corrected DIBOL run-time system should be installed as follows:

```
RUN $UTILTY<cr>
<UTILTY's Header Line>
#REMOVE DIBOL<cr>
#ADD DIBOL<cr>
#^Z                                            (CTRL/Z to exit)
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL

Seq 39.5.9 M

MEMORY NOT RETURNED FROM ISAM OPEN - MANDATORY DIBOL PATCH (ES)

PROBLEM:
A program which repeatedly opens and closes an ISAM file will eventually get an error 9 - Not Enough Available Memory because memory used for the open is not being returned when the ISAM file is closed.

SOLUTION:
The patch detailed below corrects the problem.

1) We shall assume that the file to be patched (DIBOL.RTS) currently resides in the public file structure in library account LB:. We shall further assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in Autopatch Kit Version "G" or later. If this distribution is unavailable, the command file (PA3905.009) may be created by specifying its file name in [logfile] below.

Type the following RSTS/E commands to install the patch manually.

```
RUN $ONLPAT<cr>
Command file name ? [logfile]=<cr>
File to patch? [0,1]DIBOL.RTS
Base address? $DEFEX
Offset address? 6757
 Base   Offset  Old     New?
140450  006757     104  ? 105
140450  006760     040  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new address)
Base address? 153666
Offset address? 4670
 Base   Offset  Old     New?
153666  004670  000167  ? 137
153666  004672  164620  ? 140144
153666  004674  010446  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^Z                             (CTRL/Z for new address)
Base address? 140000
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL

Seq 39.5.9 M

2 of 2

```
Offset address? 144
 Base   Offset  Old     New?
140000  000144  000000  ? 4737
140000  000146  000000  ? 145402
140000  000150  000000  ? 16200
140000  000152  000000  ? 42
140000  000154  000000  ? 16201
140000  000156  000000  ? 44
140000  000160  000000  ? 137
140000  000162  000000  ? 145402
140000  000164  000000  ? ^Z                    (CTRL/Z for new offset)
Offset address? ^C                             (UP-ARROW/C to exit)
Patch complete
1 patch installed

Command file name ? ^Z                         (CTRL/Z to end)
```

3) The corrected run-time system should be re-installed as follows:

```
RUN $UTILTY.BAC<cr>
#REMOVE DIBOL<cr>
#ADD DIBOL<cr>
#^Z                                            (CTRL/Z to exit)
```

PROGRAMS EXCEEDING AVAILABLE SPACE - DIBOL-11 RESTRICTION (RI)

PROBLEM:

DIBOL-11 programs which attempt to exceed available user core space may fail with a 'Not Enough Available Memory' error message. On some occasions the program may then become trapped in an unending sequence of error messages (e.g. 'Memory Management Violation') and the job must be killed from another terminal.

RESTRICTION:

DIBOL-11 programs should not attempt to exceed available memory.

Note:

There are two ways in which the problem may be skirted: the amount of available user space may (in some cases) be increased, or the program size may be decreased. In the first case, the system manager may remove any maximum size specification specified during the RSTS startup procedure. This will allow up to 24 K words for DIBOL user space if the RSTS Swapmax is at its maximum of 28 K words. This solution may be undesirable on systems with limited disk swapping space available. In the second case, the individual DIBOL program's size may decrease by either optimizing during compilation (compile '/O'), or by overlaying suitable subroutines when linking with the Task Builder.

DIBOL-11/DECFORM V4C
for RSTS/E V7
DECFORM

Seq 39.6.2 F

1 of 2

ERRORS IN THE GTFORM DATA ENTRY SUBROUTINE - DECFORM PATCH (GH)

PROBLEM:

The data entry subroutine GTFORM that has been provided with DECFORM will have a few problems when used with only three arguments or under certain error conditions.

SOLUTION:

Installing the patch detailed below into the GTFORM.OBJ object module will correct the problems. The command file for this patch appears in patch kit version "F" or later.

PROCEDURE:

1. Build the following correction file using an editor and name it: GTFORM.COR.

```
        .TITLE  GTFORM
        .IDENT  "06C04A"
        .PSECT  GTFORM
$PC=.
.=$PC+26
        JMP     PAT1
.=$PC+220
        CALL    PAT2
.=$PC+446
        BNE     70$
        NOP
.=$PC+500
70$:
.=$PC+516
        TSTB    @#402
.=$PC+574
DATA:
.=$PC+616
RCVRID:         .BLKB   6
PAT1:   MOVB    @#402,(R4)
        CLRB    RCVRID
        RETURN
PAT2:   TST     R3
        BNE     10$
        TST     (SP)+
        RETURN
10$:    MOV     (R5)+,DATA
        RETURN
        .END
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DECFORM

Seq 39.6.2 F

2 of 2

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>GTFORM.PAT=GTFORM.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Copy the original module from the library as follows:

```
RUN $PIP.SAV
*GTFORM.OLD=SY:$GTFORM.OBJ
*^Z                                             (CTRL/Z to exit)
```

4. Run the patch utility to merge the correction into the old module:

```
RUN $PAT.TSK
PAT>GTFORM=GTFORM.OLD/CS:102356,GTFORM.PAT/CS:017103
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library and set its protection code:

```
RUN $PIP.SAV
*SY:$=GTFORM.OBJ
*SY:$GTFORM.OBJ<40>/RE
*^Z                                             (CTRL/Z to exit)
```

6. It is necessary to re-task build your BASIC-PLUS-2 or COBOL programs in order to incorporate this correction. It is not necessary to re-compile.

DIBOL-11/DECFORM V4C
for RSTS/E V7
DECFORM

Seq 39.6.4 M

SUBSCRIPT ERROR ON LONG FILE NAMES -- MANDATORY DECFORM PATCH (RI)

PROBLEM:
Long RSTS/E file names (i.e. longer than 14 characters) cause fatal subscript errors.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the file to be patched (FOCOMP.MLB) resides on the system file structure in the library account LB:. We shall also assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in Autopatch Kit Version "G" or later. If this distribution is unavailable, the command file (PA3906.004) may be created by typing the file name in for [logfile] below.

Type the following RSTS/E commands to install the patch manually.

3) Extract the module to be patched from the Decform Library as follows:

```
RUN $LBR.TSK<cr>
LBR>MS8.DBL=LB:FOCOMP.MLB/EX:MS8<cr>
LBR>^Z                                    (CTRL/Z to exit)
```

4) Patch the extracted file as follows:

```
RUN $ONLPAT.SAV
Command file name? [logfile]=<cr>
File to patch? MS8.DBL<cr>
Base address? 0<cr>
Offset address? 356<cr>
 Base   Offset  Old     New?
000000  000356  030501  ? 031101<cr>
000000  000360  000064  ? 70<cr>
000000  000362  000011  ? ^Z                    (CTRL/Z for new offset)
Base address? ^C                               (up-arrow C to exit)
Patch Complete
1 patch installed

Command file name? ^Z                          (CTRL/Z to end)
```

5) Replace the corrected module into the Decform Library as follows:

```
RUN $LBR.TSK<cr>
LBR>LB:FOCOMP.MLB/RP=MS8.DBL<cr>

MODULE "MS8    " REPLACED
LBR>^Z                                  (CRTL/Z to exit)
```

6) The corrected subroutine and the patch command file should now be safely stored off-line and then deleted from the public file structure as follows:

```
RUN $PIP.SAV<cr>
*MS8.DBL/DE<cr>
*^Z                                     (CTRL/Z to exit)
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DECFORM

Seq 39.6.5 M

FORMATS NOT CLEARED BETWEEN MODE CHANGES - MANDATORY DECFORM PATCH (RI)

PROBLEM:
Formats are not initialized properly between mode changes in certain circumstances.

SOLUTION:
The patch detailed below corrects the problem.

PROCEDURE:

1) We shall assume that the file to be patched (DECF0.DBL) resides on the public file structure in the library account [1,2]. We shall further assume that the patching procedure will be carried out from a privileged account.

2) The command file for this patch appears in Autopatch Kit version "G" or later. If this distribution is unavailable, the command file (PA3906.005) may be created by specifying the file name in [logfile] below.

Type the following RSTS/E commands to install the patch by hand.

```
RUN $CPATCH<cr>
<CPATCH's header line>
File to patch - $DECF0.DBL=$DECF0.DBL<cr>
#[logfile] =<cr>
*H/SRCH,/AL<cr>
INIT,<tab>XCALL DECFI(5)<tab><tab><tab>;CALL CLRREC<cr>
*I<cr>
<tab>S =<cr>
<esc>*2H/MCHG,/2AL<cr>
<tab>GOTO OKF<tab><tab><tab>;MODE CHANGE WAS ALLOWED<cr>
*I<cr>
<tab>IF (NEWSC) S =<cr>
<esc>*EX<cr>
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DECFORM

Seq 39.6.5 M

2 of 2

```
#^Z                                          (CTRL/Z to exit)
File to patch - ^Z                           (CTRL/Z to exit)

Ready
```

3) The patched source code should now be safely stored off-line. The temporary files created by this patching procedure should now be deleted as follows:

```
RUN $PIP.SAV<cr>
*$DECF0.BAK/DE<cr>
*^Z                                          (CTRL/Z to exit)
```

4) Now any forms which utilize Batch Total Registers should be re-built to implement the corrected code.

DIBOL-11/DECFORM V4C
for RSTS/E V7
ISMUTL V04C

Seq 39.7.1 F

DMS-500 ACCESS TO DIBOL ISAM FILES - MANDATORY ISMUTL PATCH (GH)

PROBLEM:

ISAM files that are created by ISMUTL can not be randomly accessed by the DMS-500 functions.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the files necessary to rebuild the ISAM Utility ISMUTL are located on the public disk structure. In the patching procedure, we will, therefore, refer to those files by the simplest form: <name>.DBL. If the files are not available as assumed, you should first copy all of these files from the distribution kit, as for example:

```
RUN $PIP.SAV
*SY:=<kit>:*.DBL,ISMUTL.*
*^Z

Ready
```

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RORG3.DBL=RORG3.DBL<cr>
#[logfile=]<cr>
*H/TMP02,/V<cr>
<tab>TMP02,<tab>D4<cr>
*AI<cr>
<tab>EOFLG,<tab>D1<cr>
<esc>*V<cr>
<cr>
```

```
*H/INXB06,/V<cr>
INXB06,<tab>INDXT=INXGRP<cr>
*AI<cr>
<tab>EOFLG=1<cr>
<esc>*V<cr>
<tab>    IF ((INXLVC-(INXLVC/2)*2).EQ.1) GO TO INXB02<cr>
*H/INXB03,/V<cr>
INXB03,<tab>    READS (9,RECBUF,INXB04)<tab><tab><tab><tab>;THIS IS A DO-WHILE
 STRUCTURE<cr>
*AI<cr>
<tab><tab>READS (9,LNKDAT)<cr>
<esc>*V<cr>
<tab><tab>XCALL DECML (RECBUF(1,1),TEMP00)<tab><tab>;CHECK FOR EOF KEY<cr>
*AV<cr>
<tab><tab>IF (TEMP00.NE.127) GO TO INXB08<cr>
*G/127/I/ .AND. TEMP00.NE.255/V<cr>
<tab><tab>IF (TEMP00.NE.127 .AND. TEMP00.NE.255) GO TO INXB08<cr>
*AI<cr>
<tab><tab>    EOFLG=2<cr>
<esc>*V<cr>
<tab><tab>    XCALL ASCII (255,RECBUF(1,1))<cr>
*H/INXB08,/V<cr>
INXB08,<tab><tab>DISPLAY (CHAN,RECBUF(1,KYLEN)) <tab><tab><tab>;WRITE THE KEY TO
 THE REAL INDEX<cr>
*AV<cr>
<tab><tab>READS (9,LNKDAT)<cr>
*KV<cr>
<tab><tab>DISPLAY (CHAN,DFNO)<tab><tab><tab><tab>;PUT OUT LINK DATA TO INDEX<cr>
*H/INXB05,/V<cr>
INXB05,<tab><tab>GO TO INXB03<cr>
*G/TO /I/(/G/03/I/,INXB08), EOFLG/V<cr>
INXB05,<tab><tab>GO TO (INXB03,INXB08), EOFLG<cr>
*H/IGRPND,/V<cr>
IGRPND,<tab>CHAN=1<cr>
*7AI<cr>
<tab>EOFLG=1<cr>
<esc>*V<cr>
<tab>INCR INXGRP<tab><tab><tab><tab><tab><tab>;COUNT OFF THE GROUPS USED<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. Now first re-compile the source file you just patched by typing the follow-
   ing commands.

```
RUN $DICOMP.TSK
*RORG3.OBJ=RORG3.DBL/W/O

   NO ERRORS DETECTED
*^Z

Ready
```

4. To re-build the ISAM Utility and re-enter it into the system library, type the following RSTS/E commands. Note that you first must assign the logical device names and account.

```
ASSIGN SY:SRC

Ready

ASSIGN SY:LIB

Ready

ASSIGN [1,2]

Ready

RUN $TKB.TSK
TKB>ISMUTL=ISMUTL/MP
ENTER OPTIONS:
TKB>HISEG=DIBOL
TKB>//

Ready

RUN $PIP.SAV<cr>
*$ISMUTL.TSK=ISMUTL.TSK<cr>
*=$ISMUTL.TSK<104>/RE<cr>
*^Z

Ready
```

5. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the patched source file.

6. Any ISAM files will have to be Reorganized or re-Created in order to take advantage of this correction.

DIBOL-11/DECFORM V4C
for RSTS/E V7
SORTG

Seq 39.8.1 M

FIX INCORRECT LINE TERMINATORS - MANDATORY SORTG PATCH (RI)

PROBLEM:

SORTG occasionally creates DIBOL DATA Division statemnts terminating with a <lf><cr> sequence rather than the <cr><lf> line terminating sequence. This may cause fatal DIBOL run-time errors.

SOLUTION:
The patch detailed below corrects the problem

PROCEDURE:

1) We shall assume that the program to patch (SORTG.DBL) resides in the public file structure in the library account [1,2]. We also shall assume that the patching procedure will be done from a privileged account.

2) The command file for this patch appears in Autopatch kit "G" or later. If this distribution is unavailable, the command file (PA3908.001) may be created by typing the file name in [logfile] below.

Type the following RSTS/E commands to install the patch manually.

```
RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $SORTG.DBL=$SORTG.DBL<cr>
#[logfile]=<cr>
*H/4C-01/-DI/2/V<cr>
;<tab>S O R T G . D B L  (RSTS  V E R S I O N V04C-02  ) <cr>
*2AI<cr>
;<tab>28-APR-79<tab>FIX FOR ILLEGAL LINE TERMINATORS UNDER RSTS<cr>
<esc>*H/PROC(1)/G/4C-01/-DI/2/V<cr>
<tab>DISPLAY(VCH,'SORT GENERATOR V04C-02 ')<cr>
*H/10,13/-5DI/13,10/V<cr>
<tab>IF(TAGFLG)DISPLAY(OCHN,'RKEY',CARG,',<tab>D1',13,10)<cr>
```

```
*H/10,13/-5DI/13,10/V<cr>
<tab>DISPLAY(OCHN,'KEY',CARG,',    D1',13,10)<cr>
*H/10,13/-5DI/13,10/V<cr>
<tab>DISPLAY(OCHN,13,10)<cr>
*H/10,13/-5DI/13,10/V<cr>
<tab>DISPLAY(OCHN,13,10)<cr>
*H/10,13/-5DI/13,10/V<cr>
<tab>DISPLAY(OCHN,13,10,';')<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                                    (CTRL/Z to exit)
File to patch - ^Z                                     (CTRL/Z to exit)

Ready
```

3) To re-compile and re-enter the program into the system library, type the following RSTS/E commands.

```
RUN $DICOMP<cr>
*$SORTG=$SORTG/O<CR>

     NO ERRORS DETECTED

*^Z                                                    (CTRL/Z to exit)

Ready


RUN $TKB.TSK<cr>
TKB>$SORTG=$SORTG,$DIBOL/LB<cr>
TKB>/<cr>
ENTER OPTIONS:
TKB>HISEG=DIBOL<cr>
TKB>//<cr>

Ready

NAME '$SORTG.TSK' AS '$SORTG.TSK<104>'<cr>

Ready
```

4) The new version of the source code should now be safely stored off-line. It and the other temporary files created by this patching procedure should be deleted as follows:

```
RUN $PIP.SAV<cr>
*$SORTG.DBL,$SORTG.OBJ,$SORTG.BAK/DE<cr>
*^Z                                                    (CTRL/Z to exit)

Ready
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
SORTG,SORTM

EXECUTE FAILS FOR LONG FILE NAMES - MANDATORY SORTG,SORTM PATCH (RI)

PROBLEM:

The EXECUTE Control Statement allows a SORT program to chain to other programs once successful completion of the sort has occured. However, if the program to which the SORT program must chain has a name longer than 14 characters (e.g. "DB2:[100,100]PAYROL.TSK"), the chaining does not occur, but rather the Sort program returns with a "Can't Find File or Account" error.

SOLUTION:

The following patches correct the problem.

NOTE:

The SORT programs created from SORTG and SORTM may only attempt to chain to other programs that have been fully compiled. An attempt to chain to a '.BAS' program, for example, will fail.

PROCEDURE:

1) We shall assume that the programs to be patched (SORTG.DBL, and SORTM.DBL) both reside on the public file structure in the system library account [1,2]. We shall further assume that the patching procedure will be performed from a privileged account.

2) The command files for this patch appear in Autopatch Kit "G" or later. If this distribution is unavailable, the command files may be created by specifying the command file names (PA3908.002 and PA3908.02A) in place of the occurances of [logfile] below.

To insert the patches manually, type the following RSTS/E commands.

```
RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $SORTG.DBL=$SORTG.DBL<cr>
#[logfile]=<cr>
*H/-02/-DI/3/V<cr>
```

```
;<tab>S O R T G . D B L  (RSTS  V E R S I O N V04C-03  ) <cr>
*H/CHAIN/V<cr>
,<tab>A12,'CHAIN,  A14,'<cr>
*G/14/-2DI/28/V<cr>
,<tab>A12,'CHAIN,  A28,'<cr>
*G/CHAIN/V<cr>
CHAIN,<tab>A14<cr>
*G/14/-2DI/28/V<cr>
CHAIN,<tab>A28<cr>
*H/-02/-DI/3/V<cr>
<tab>DISPLAY(VCH,'SORT GENERATOR V04C-03 ')<cr>
*AH/CHAIN/V<cr>
<tab>CHAIN=WRKLIN(X1+1,X1+14)<cr>
*G/14/-2DI/28/V<cr>
<tab>CHAIN=WRKLIN(X1+1,X1+28)<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                          (CTRL/Z to exit)
File to patch - ^Z                           (CTRL/Z to exit)

Ready

RUN $CPATCH<cr>
<CPATCH's Header Line>
File to patch - $SORTM.DBL=$SORTM.DBL<cr>
#[logfile]=<cr>
*H/-01/-DI/2/V<cr>
;<tab>S O R T M . D B L  (RSTS V E R S I O N V04C-02  )<cr>
*3H/CHAINL/V<cr>
CHAINL,<tab>A14<tab><tab>;PROGRAM CHAIN LINKAGE.<cr>
*G/14/-2DI/28/V<cr>
CHAINL,<tab>A28<tab><tab>;PROGRAM CHAIN LINKAGE.<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z                                          (CTRL/Z to exit)
File to patch - ^Z                           (CTRL/Z to exit)

Ready
```

3) To re-compile (where necessary) these programs and re-enter them into the system library, type the following RSTS/E commands.

```
RUN $DICOMP<cr>
*$SORTG.OBJ=$SORTG.DBL/O<cr>
    NO ERRORS DETECTED

*^Z                                        (CTRL/Z to exit)

Ready

RUN $TKB.TSK<cr>
TKB>$SORTG=$SORTG,$DIBOL/LB<cr>
TKB>/<cr>
ENTER OPTIONS:
TKB>HISEG=DIBOL<cr>
TKB>//<cr>
Ready
```

4) The new source code should new be safely stored off-line. It and any temporary files created by this patching operation should be deleted from the public file structure as follows:

```
RUN $PIP.SAV<cr>
*$SORTG.DBL,$SORTG.OBJ,$SORTG.BAK,$SORTM.BAK/DE<cr>
*^Z                                        (CTRL/Z to exit)
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
SORTP EXTERNAL UTILITY SUBROUTINE

SORT ON DECIMAL KEY FAILS IF SPACES APPEAR IN KEY - DIBOL PATCH (RI)

PROBLEM:
A DIBOL-11 SORT program which is keying on Decimal field(s) will sort the file incorrectly if non-numeric information appears in the field(s). Thus if a decimal field is space-filled instead of zero-filled, the sort will fail. Though the user should maintain the integrity of his decimal information, this patch may optionally be installed to cause DIBOL-11 to treat spaces as zeroes when they appear in decimal key fields.

SOLUTION:
The following patch corrects the problem.

PROCEDURE:

1) We shall assume that the file to be patched (DIBOL.OLB) resides on the public file structure in the system library acct. [1,2]. We shall further assume that the patching procedure will be done from a privileged account.

2) The command file for this patch appears in Autopatch kit "G" or later. If this distribution is unavailable, the command file (PA3908.003) may be created by typing the file name in [logfile] below.

To apply the patch manually, type the following RSTS/E commands.

3) Create the following correction file using any available editor and name it "SORTP.COR"

```
        .TITLE  SORTP
        .IDENT  /4C.02/
        .CSECT  SORTP
PC$ = .
. = PC$ + 736
        BR      PATU1
. = PC$ + 750
RTN:    INC     K
. = PC$ + 766
CDONE:  RTS     PC
. = PC$ + 1222
```

```
K:      .WORD   0
. = PC$ + 1270
PAT01:  CMPB    (R1)+,  (R2)+
22$:    MOVB    (R1)+,  REG3
        MOVB    (R2)+,  REG4
        BIC     #177760,        REG3
        BIC     #177760,        REG4
        CMPB    REG3,   REG4
        BNE     CDONE
        DEC     R0
        BNE     22$
        JMP     RTN
REG3:   .WORD   0
REG4:   .WORD   0
        .END
```

4) Extract the SORTP subroutine from the DIBOL.OLB library as follows:

```
RUN $LBR.TSK<cr>
LBR>SORTP.OLD=$DIBOL/EX:SORTP<cr>
LBR>^Z                                          (CTRL/Z to exit)
```

5) Assemble the correction file as follows:

```
RUN $MAC.TSK<cr>
MAC>SORTP.PAT=SORTP.COR<cr>
MAC>^Z                                          (CTRL/Z to exit)
```

6) Merge the patch file with the old subroutine as follows:

```
RUN $PAT.TSK<cr>
PAT>SORTP.OBJ=SORTP.OLD/CS:145320,SORTP.PAT/CS:23330<cr>
PAT>^Z                                          (CTRL/Z to exit)
```

7) Install the corrected subroutine into the DIBOL library as follows:

```
RUN $LBR.TSK<cr>
LBR>$DIBOL/RP=SORTP<cr>
Module   "SORTP"   Replaced

LBR>^Z                                          (CTRL/Z to exit)
```

8) The correction file should now be safely stored off line, and deleted from the public file structure (along with temporary files created by the patching procedure) as follows.

```
RUN $PIP.SAV<cr>
*SORTP.OLD,SORTP.OBJ,SORTP.PAT,SORTP.COR/DE<cr>
*^Z                                             (CTRL/Z to exit)

Ready
```

9) Re-build the necessary tasks to run with the correction installed.

DIBOL-11/DECFORM V4C
for RSTS/E V7
SORTG

RESTRICTION TO LOGICAL DEVICE NAMES IN SORTG (RI)

PROBLEM:
The SORTG Data Division Generator currently allows only 3 characters for a logical device name instead of the 6 possible characters allowed by RSTS/E.

RESTRICTION:
The maximum number of characters for logical device names in SORTG will remain at 3 due to the length of the patch required.

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL-11 Language Reference Manual (AA-1760D-TC)

RENAM ARGUMENTS DESCRIBED INCORRECTLY (ES)

Section B.23, page B-43, of the DIBOL-11 Language Reference Manual, Order No. AA-1760D-TC, defines the arguments of the RENAM external subroutine incorrectly. This has been corrected in the recently published new edition of this document with Order No. AA-1760E-TC.

The calling sequence is of the form:

```
XCALL RENAM (ch, filespec1, filespec2)
```

where:

ch is an unused channel number (1-15).

filespec1 is the new file name.

filespec2 is the current file name.

The example at the bottom of the page also needs to be corrected to correspond to this change.

Example:

```
PROC
OPEN(1,O,'TEST')
WRITES(1,'TEST DATA')                ;CREATE A TEST FILE
XCALL RENAM(4,'NEWTST','TEST')       ;RENAME FILE FROM TEST TO
STOP                                 ;NEWTST
END
```

DIBOL-11/DECFORM V4C
for RSTS/E V7
DIBOL-11 LANGUAGE REFERENCE MANUAL

INCORRECT RECV DESCRIPTION

PROBLEM:
The DIBOL-11 Language Reference Manual (AA-176OE-TC) incorrectly describes CTS-500 RECV characteristics on page 3-51 (Pp. 3.5.20). The second statement in the indented paragraph states that "If the length of the message exceeds the size of the field or record, the rightmost characters that caused the overflow are truncated."

SOLUTION:
The following description should be inserted in its place.

> If the length of the message exceeds the size of the field or record, one of two results will occur depending on the operating system. For CTS-300 users, the rightmost characters that caused the overflow are truncated. For CTS-500 users, the rightmost characters that caused the overflow are saved by the operating system and used as the next message pending for the receiving program. Thus the receiving program will receive the surplus characters the next time a RECV command is issued.

DIBOL-11/DECFORM V4C
for RSTS/E V7.Ø
Build Procedures

INSTALLING DIBOL V4C ON RSTS/E V7.Ø

Prior to the installation of DIBOL V4C on RSTS/E V7.Ø, you must be running under the BASIC-PLUS Run-Time System. If you are not, you must first switch run-time systems. For example,

```
RUN $SWITCH<cr>
Run-Time System to switch to? BASIC<cr>

Ready
```

DATATRIEVE V1.1
for RSTS/E V7.Ø
Package Notes

Seq 42.1.1 N

INSTALLING DATATRIEVE V1.1 ON RSTS/E V7.Ø

Prior to the installation of Datatrieve V1.1 on RSTS/E V7.Ø, LB: must be assigned to SY:[1,1]. In order to install Datatrieve V1.1, you must be logged into a privileged account other than [1,2].

FORTRAN IV/RSTS/E V2.1
for RSTS/E V7

FORTRAN IV V2.1 MAINTENANCE RELEASE (RB)

FORTRAN IV V2.1 is a maintenance release for RSTS/E and RT-11 systems. The primary goal of this release is enhanced product quality, which is reflected by the following major features:

- o a new, simplified installation procedure for use on RT-11 systems.
- o full support for stand-alone FORTRAN (SIMRT)
- o corrections to problems encountered in V2.04 that relate to in-line code generation
- o corrections to V2.04 problems with the OPEN/CLOSE statements

In addition, all other significant problems in Version 2.04 have been fixed. At this time, the only known restrictions are:

- o function definitions require statements of the form
  ```
  REAL FUNCTION F*4 (A)
  ```
  rather than the alternate form
  ```
  REAL *4 FUNCTION F (A)
  ```
- o ASC11 null characters cannot be output to a terminal.
- o SIMRT: the real-time clock must be disabled when running stand-alone FORTRAN programs from PROM.
- o RT-11 specific restrictions:
  - Restart of the FORTRAN compiler and FORTRAN programs does not operate correctly.
  - When CALL ASSIGN is used to request a file name under the F/B monitor, a CTRL/F must be typed before entering the file name.
- o RSTS/E specific restrictions:
  - An explicit terminal reference in a file name (e.g. KB2:) does not operate correctly; the users terminal KB: is used instead.
  - The DISPOSE = 'PRINT' or 'DELETE' parameters in the OPEN/CLOSE statements do not work; the file is always saved.

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.1 M
1 of 2

PATCH 1

PROBLEM:

FORTRAN fails to compile functions and subroutines with null arguments when inline code is specified.

SOLUTION:

1. Type in the following MACRO file and name it PATØ1.MAC

```
        .TITLE  CONVRT
        .IDENT  /ØØ3A/
        .PSECT  F13CB
U:
.=U+12Ø2
        MOV     N,RØ
        BEQ     U+1226
        CLR     A

        .PSECT  F13DB
D:
.=D+2
N:
.=D+5Ø
A:

        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØ1=PATØ1.MAC
*^Z
```

NOTE: Make sure you save a copy of the module to be patched in case something goes wrong.

3. Install the patch, using PAT, to the most recent version of the compiler module.

```
.R PAT.SAV
*CONVRT=CONVRT,PATØ1.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patch by compiling, linking, and running the following program:

```
A = B( )
END
```

6. The program should compile correctly. If it does not, go back to Step 1 and begin again.

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.2 M

1 of 2

PATCH 2

PROBLEM:

FORTRAN fails to compile DO-loops with a BYTE variable.

SOLUTION:

1. Type in the following MACRO file and name it PATØ2.MAC

```
        .TITLE  F8
        .IDENT  /ØØ2A/
        .PSECT  F8B
U = .
.=U+136Ø
A:
.=U+5Ø32
        JSR     PC,A
.=U+5Ø5Ø
        JSR     PC,A
.=U+526Ø
        JSR     PC,A

        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØ2=PATØ2.MAC
*^Z
```

NOTE: Make sure you save a copy of the module to be patched in case something goes wrong.

3. Install the patch, using PAT, to the most recent version of the compiler module.

```
.R PAT.SAV
*F8=F8,PATØ2.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patch by compiling, linking, and running the following program:

```
        BYTE    B
        DO 1Ø I=1,B
1Ø      CONTINUE
        END
```

6. The program should compile normally. If it does not, go back to Step 1 and begin again.

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.3 M

1 of 2

PATCH 3

PROBLEM:

FORTRAN generates incorrect code for arrays used as arguments for subroutines when inline code is specified.

SOLUTION:

1. Type in the following MACRO file and name it PATØ3.MAC

```
        .TITLE  REGALO
        .IDENT  /ØØ6A/
        .PSECT  REGI2
.=.+6154
        NOP
        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØ3=PATØ3.MAC
*^Z
```

   NOTE: Make sure you save a copy of the module to be patched in case something goes wrong.

3. Install the patch, using PAT, to the most recent version of the compiler module.

```
.R PAT.SAV
*REGALO=REGALO,PATØ3.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patch by compiling, linking, and running the following program:

```
INTEGER J(3)
CALL    X(J)
TYPE    *,J(3)
STOP
END
SUBROUTINE      X(M)
DIMENSION       M(3)
N=21
M(3) = N
RETURN
END
```

6. The value 21 should be printed on the terminal. If it is not, go back to Step 1 and begin again.

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.4 M

1 of 2

REGISTER ALLOCATION - PATCH 8

PROBLEM:

The register allocation phase of the FORTRAN compiler produces incorrect inline code.

SOLUTION:

1. Type in the following MACRO file and name it PATØØ8.MAC

```
        .TITLE  REGALO
        .IDENT  /ØØ6A/
        .PSECT  REGD2
T:
.=T+112
U:
        .PSECT  REGI2
S:
.=S+1Ø6Ø6
        .WORD   1454
.=S+1137Ø
        JSR     PC,PAT
        NOP
.=S+11404
R:
.=S+11614
        JSR     PC,PAT1
        BCS     S+11572
.=S+1207Ø
        JSR     PC,PAT2
.=S+12244
        .WORD   111ØØ
        .WORD   ØØ63ØØ
        .WORD   ØØ576Ø

        .PSECT  PATREG

PAT:
        TSTB    @R5
        BEQ     1$
        BICB    R(RØ),1(R5)
1$:     RTS     PC

PAT1:   ADD     R3,RØ
        TST     @RØ
        BPL     2$
        CMP     RØ,U
        BMI     2$
        CLC
        RTS     PC
2$:     SEC
        RTS     PC
```

```
PAT2:   TSTB    @R1
        BEQ     3$
        BICB    R(RØ),1(R1)
3$:     RTS     PC

        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØØ8=PATØØ8.MAC
*^Z
```

3. Install the patch, using PAT, to the most recent version of the compiler module.

```
.R PAT.SAV
*REGALO=REGALO,PATØØ8.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patch by compiling the following programs:

a.
```
FUNCTION ITEST(A)
INTEGER A(3,3),SUM
SUM=A(1,1)+A(2,2)+A(3,3)
TYPE *,A(1,3),A(2,2),A(3,1)
NSUM=SUM+A(1,3)
RETURN
END
```

b.
```
K=J
L=2*K/L
END
```

Both programs should compile without problems.

NOTE

If the newly patched compiler gives an error message of "M-trap ...", please edit the file F4LINK.CMD and increase "/K:12." (in the second line) to a larger number. Rebuild the compiler again.

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.6 M

1 of 2

FORTRAN FAILS TO COMPILE DO-LOOPS WITH BYTE INDEX VARIABLES

PROBLEM:

FORTRAN fails to compile DO-loops with BYTE variables as its upper and lower limits when inline code is specified.

SOLUTION:

NOTE

The mandatory compiler patch described in article Seq 41.2.2 M ("Patch 2") must have been installed in order for this patch to work correctly.

1. Type in the following MACRO file and name it PAT11.MAC

```
        .TITLE  F9
        .IDENT  /ØØ3A/
        .PSECT  F9DB
T:
.=T+34
U:
        .PSECT  F9CB
S:
.=S+1442
        JSR     PC,PAT11
.=S+5ØØ4
        .WORD   4ØØØ4

        .PSECT  PATØØ9
        .GLOBL  SYTEND
PAT11:  MOV     U,R1
        MOV     @R1,R2
        CMP     R1,SYTEND
        BHIS    1$
        BIT     #34ØØ,R2
        BEQ     1$
        ASL     R2
        ASL     R2
        ASL     R2
        ASL     R2
1$:     MOV     R2,@RØ
        RTS     PC
        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PAT11=PAT11.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched F9.OBJ file:

```
.R PAT.SAV
*F9=F9,PAT11.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling the following program:

```
        BYTE A(2),B(2)
        DO 1ØØ I = A(2),B(2)
1ØØ     CONTINUE
        END
```

6. The program should compile correctly. If it does not, go back to Step 1 and begin again.

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.7 M
1 of 2

FORTRAN FAILS TO OPTIMIZE COMMON SUBEXPRESSIONS

PROBLEM:

FORTRAN fails to optimize common subexpressions correctly.

SOLUTION:

1. Type in the following MACRO file and name it PAT14.MAC

```
        .TITLE  F11
        .IDENT  /Ø3/
        .PSECT  F11B
S:
.=S+2434
S1:
.=S+3744
        JSR     PC,PAT14
        NOP

        .PSECT  PATØ11
PAT14:
        MOV     R4,-(SP)
        MOV     RØ,R4
        JSR     PC,S1
        MOV     (SP)+,R4
        CLR     @RØ
        INCB    1(R4)
        RTS     PC
        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PAT14=PAT14.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched F11.OBJ file:

```
.R PAT.SAV
*F11=F11,PAT14.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling the following program:

```
DIMENSION D(6,6)
C1=E*A/S
C2=12.*E*AI/(S*S*S*(1.+AL))
C3=.5*S*C2
C4=E*AI/(S*(1.+AL))
D(1,1)=C1
D(1,2)=Ø.Ø
D(1,3)=Ø.Ø
D(1,4)=-C1
D(1,5)=Ø.Ø
D(1,6)=Ø.Ø
D(2,2)=C2
D(2,3)=-C3
D(2,4)=Ø.Ø
D(2,5)=-C2
D(2,6)=-C3
D(3,3)=(4.+AL)*C4
D(3,4)=Ø.Ø
D(3,5)=C3
D(3,6)=(2.-AL)*C4
D(4,4)=C1
D(4,5)=Ø.Ø
D(4,6)=Ø.Ø
D(5,5)=C2
D(5,6)=C3
D(6,6)=D(3,3)
END
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.8 M
1 of 3

THE COMPILER REGISTER ALLOCATION PHASE PRODUCES INCORRECT INLINE CODE

PROBLEM:

The register allocation phase of the FORTRAN compiler sometimes produces incorrect inline code.

SOLUTION:

1. Type in the following MACRO file and name it PAT16.MAC

```
        .TITLE  REGALO
        .IDENT  /ØØ6B/
        .PSECT  REGI2
S:
.=S+1Ø242
        JSR     PC,PAT16
.=S+11Ø4Ø
        BNE     A
.=S+11112
A:
        .PSECT  PATREG
T:
.=T+54
PAT16:
        CMPB    @12(R4),#77
        BNE     1$
        TST     RØ
        BNE     1$
        BIC     #4ØØ,2(R4)
1$:     SUB     4-1Ø(R2),RØ
        RTS     PC

        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PAT16=PAT16.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched REGALO.OBJ file:

```
.R PAT.SAV
*REGALO=REGALO,PAT16.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling and verifying the EIS code in the following 2 programs:

```
        BYTE    A(2), B(2,3), C
        C=A(I) .OR. B(K,I)
        END
```

which should produce the following code:

```
.MAIN.
FORTRAN IV      Generated Code for Program Unit .MAIN.

                                        ; Statement #ØØØ2
ØØØØØ6          MOV     #2,@$AOTS
ØØØØ14          MOV     I,R2
ØØØØ2Ø          MOV     R2,R1
ØØØØ24          ASL     R1
ØØØØ3Ø          ADD     K,R1
ØØØØ34          MOVB    A-1(R2),C
ØØØØ36          BISB    B-3(R1),C
                                        ; Statement #ØØØ3
ØØØØ44          INC     @$AOTS
ØØØØ5Ø          RTS     PC
```

and:

```
        INTEGER K(128)
        M=((I1-1))*4+I2
        K((I1-1)*32+16)=M
        K((I1-1)*32+19)=I2
        END
```

which should produce the following code:

```
.MAIN.
FORTRAN IV      Generated Code for Program Unit .MAIN.

                                            ; Statement #ØØØ2
ØØØØØ6          MOV     #2,@$AOTS
ØØØØ14          MOV     I1,R1
ØØØØ2Ø          DEC     R1
ØØØØ22          ASL     R1
ØØØØ24          ASL     R1
ØØØØ26          MOV     I2,R3
ØØØØ32          MOV     R3,R4
ØØØØ34          ADD     R1,R4
ØØØØ36          MOV     R4,M
                                            ; Statement #ØØØ3
ØØØØ42          INC     @$AOTS
ØØØØ46          MOV     R1,R2
ØØØØ5Ø          ASH     #3,R2
ØØØØ54          MOV     R2,RØ
ØØØØ56          ASL     RØ
ØØØØ6Ø          MOV     R4,K+36(RØ)
                                            ; Statement #ØØØ4
ØØØØ64          INC     @$AOTS
ØØØØ7Ø          MOV     R2,RØ
ØØØØ72          ASL     RØ
ØØØØ74          MOV     R3,K+44(RØ)
                                            ; Statement #ØØØ5
ØØ1ØØ          INC     @$AOTS
ØØ1Ø4          RTS     PC
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.9 M
1 of 2

FORTRAN CRASHES IF A BYTE ARRAY IS USED AS RECORD COUNT VARIABLE IN DIRECT I/O

PROBLEM:

FORTRAN crashes if a byte array element is used as the record count variable in a direct access I/O statement.

SOLUTION:

1. Type in the following MACRO file and name it PAT17.MAC

```
        .TITLE  F8
        .IDENT  /ØØ2B/
        .PSECT  F8B
S:
.=S+15Ø6
A:
.=S+374Ø
        JSR     PC,A

        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PAT17=PAT17.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched F8.OBJ file:

```
.R PAT.SAV
*F8=F8,PAT17.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling and verifying the EIS code produced by the following program:

```
        BYTE A(3)
        READ(I'A(J)) K
        END
```

which should produce the following code:

```
.MAIN.
FORTRAN IV      Generated Code for Program Unit .MAIN.

                                        ; Statement #ØØØ2
ØØØØØ6          MOV     #2,@$AOTS
ØØØØ14          MOV     #I,-(SP)
ØØØØ2Ø          MOV     J,RØ
ØØØØ24          MOVB    A-1(RØ),R1
ØØØØ3Ø          MOV     R1,T$IH
ØØØØ34          MOV     #T$IH,-(SP)
ØØØØ4Ø          JSR     PC,$IRR
ØØØØ44          MOV     #K,-(SP)
ØØØØ5Ø          JSR     PC,$TVI
ØØØØ54          JSR     PC,$EOL
                                        ; Statement #ØØØ3
ØØØØ6Ø          INC     @$AOTS
ØØØØ64          RTS     PC
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
COMPILER

Seq 41.2.1Ø M

1 of 3

INCORRECT CODE IS GENERATED FOR COMPARISON BETWEEN A COMPLEX VARIABLE AND A COMPLEX CONSTANT

PROBLEM:

FORTRAN generates incorrect code for comparison between a complex variable and a complex constant.

SOLUTION:

1. Type in the following MACRO files and name them PAT18A.MAC, PAT18B.MAC, PAT18C.MAC and PAT18D.MAC.

PAT18A.MAC:

```
        .TITLE  FORTRAN IV COMPILER
        .PSECT  CGØ2S
.=.+1636
        JSR     PC,PAT22A

        .PSECT  PATØ15
PAT22A: CMPB    CUROPR,#7Ø
        BEQ     1$
        MOV     #6,R4
1$:
        RTS     PC

        .PSECT  CGØ2D
.=.+1376
CUROPR:
        .END
```

PAT18B.MAC:

```
        .TITLE  FORTRAN IV COMPILER
        .PSECT  CGØ3S
.=.+1344
        JSR     PC,PAT22B

        .PSECT  PATØ16
PAT22B: CMPB    CUROPR,#7Ø
        BEQ     1$
        MOV     #6,R4
1$:
        RTS     PC

        .PSECT  CGØ3D
.=.+1276
CUROPR:
        .END
```

PAT18C.MAC:

```
        .TITLE  FORTRAN IV COMPILER
        .PSECT  CGØ4S
.=.+1336
        JSR     PC,PAT22C

        .PSECT  PATØ17
PAT22C: CMPB    CUROPR,#7Ø
        BEQ     1$
        MOV     #6,R4
1$:
        RTS     PC

        .PSECT  CGØ4D
.=.+1ØØ6
CUROPR:
        .END
```

PAT18D.MAC:

```
        .TITLE  F21
        .PSECT  CGHWDP
.=.+3Ø2Ø
        MOV     -6(R1),R1

        .END
```

2. Assemble the patch files using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PAT18A=PAT18A.MAC
*PAT18B=PAT18B.MAC
*PAT18C=PAT18C.MAC
*PAT18D=PAT18D.MAC
*^Z
```

3. Install the patches, using PAT, to the most recently patched F15.OBJ, F16.OBJ, F17.OBJ, and F21.OBJ files:

```
.R PAT.SAV
*F15=F15,PAT18A.OBJ
.R PAT.SAV
*F16=F16,PAT18B.OBJ
.R PAT.SAV
*F17=F17,PAT18C.OBJ
.R PAT.SAV
*F21=F21,PAT18D.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking, and running the following program:

```
COMPLEX A
A=(Ø.Ø,1.Ø)
IF(A .EQ. (Ø.Ø,Ø.Ø)) TYPE *, 'A IS ZERO'
IF(A .NE. (Ø.Ø,Ø.Ø)) TYPE *, 'A IS NON-ZERO'
END
```

which should output

```
'A IS NON-ZERO'
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.1 M
1 of 3

SIMRT PROBLEMS

PROBLEM:

A FORTRAN stand-alone program will give the error:

"*** A REQUESTED OPERATION NEEDS RT-11"

SOLUTION:

1. Type in one of the following MACRO files, depending on which hardware libraries you will be using, and name it PATØ5x.MAC, as indicated below.

PATØ5A.MAC - PATCH FOR THE NHD LIBRARY

```
        .TITLE  OTINIT  ; NHD LIBRARY
        .IDENT  /ØØ5A/
        .PSECT  OTS$I
U:
.=U+7Ø
        TST     A
        .WORD   ØØ1Ø34
        EMT     375

        .PSECT  OTS$P
.=.+46
A:
        .END
```

PATØ5B.MAC - PATCH FOR THE EAE LIBRARY

```
        .TITLE  OTINIT  ; EAE LIBRARY
        .IDENT  /ØØ5A/
        .PSECT  OTS$I
U:
.=U+76
        TST     A
        .WORD   ØØ1Ø34
        EMT     375

        .PSECT  OTS$P
.=.+46
A:
        .END
```

PATØ5C.MAC - PATCH FOR THE EIS LIBRARY

```
        .TITLE  OTINIT  ; EIS LIBRARY
        .IDENT  /ØØ5A/
        .PSECT  OTS$I
U:
.=U+7Ø
        TST     A
        .WORD   ØØ1Ø34
        EMT     375

        .PSECT  OTS$P
.=.+46
A:
        .END
```

PATØ5D.MAC - PATCH FOR THE FIS LIBRARY

```
        .TITLE  OTINIT  ; FIS LIBRARY
        .IDENT  /ØØ5A/
        .PSECT  OTS$I
U:
.=U+76
        TST     A
        .WORD   ØØ1Ø34
        EMT     375

        .PSECT  OTS$P
.=.+46
A:
        .END
```

PATØ5E.MAC - PATCH FOR THE FPU LIBRARY

```
        .TITLE  OTINIT  ; FPU LIBRARY
        .IDENT  /ØØ5A/
        .PSECT  OTS$I
U:
.=U+1Ø2
        TST     A
        .WORD   ØØ1Ø34
        EMT     375

        .PSECT  OTS$P
.=.+46
A:
        .END
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.1 M

3 of 3

2. Assemble the appropriate patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØ5x=PATØ5x.MAC
*^Z
```

where PATØ5x corresponds to the file you created in step 1.

3. Install the patch using PAT.SAV to the OTS file corresponding to the hardware specific library you are using:

```
NHD.OBJ
EAE.OBJ
EIS.OBJ
FIS.OBJ
FPU.OBJ
```

All object files are included in the FORTRAN IV V2.1 distribution kit on account [1,2].

Make sure to always apply the patches to a copy of the distribution kit.

```
.R PAT.SAV
*XXX=XXX.OBJ,PATØ5x.OBJ
```

where XXX = EAE, EIS, FIS, FPU or NHD and PATØ5x corresponds to the file you created in step 1.

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module XXX.OBJ by copying it to the account where the installation will be done.

5. Test the patch by compiling, linking, and running any stand-alone program.

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.2 M
1 of 2

REPEATED COMBINATION - PATCH 4

PROBLEM:

A repeated combination of:

open an old file

read from the file until the end

rewind the file

write to the file, and

close the file

causes a memory trap error.

SOLUTION:

1. Type in the following MACRO file and name it PATØØ4.MAC

```
        .TITLE  $CLOSE
        .IDENT  /Ø4/
        .PSECT  OTS$I
S:
.=S+226
        JSR     PC,PAT
        NOP
        .PSECT  PAT
PAT:    MOV     (SP)+,RØ
        MOV     (SP)+,242(R3)
        MOV     (SP)+,R4
        MOV     R4,24(R3)
        JMP     @RØ

        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØØ4=PATØØ4.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT.SAV
*OTSCOM=OTSCOM,PATØØ4.OBJ
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.2 M

All object files are included in the FORTRAN IV V2.1 distribution kit under the account [1,2]. Make sure to always apply the patches to a copy of the distribution kit.

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking, and running the following program:

```
        PROGRAM PATØØ4
        DIMENSION ICHAR(8Ø)
        OPEN(UNIT=1,NAME='ICHAR.DAT',TYPE='NEW')
        WRITE(1,1ØØ)
        CLOSE(UNIT=1)
        DO 1Ø I=1,5
        OPEN(UNIT=1,NAME='ICHAR.DAT',TYPE='OLD')
        READ(1,2ØØ)ICHAR
        REWIND 1
        WRITE(1,1ØØ)
1Ø      CLOSE(UNIT=1)
1ØØ     FORMAT('ABCDEFG...')
2ØØ     FORMAT(8ØA1)
        END
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.3 M
1 of 2

OPEN FAILURE WITH TYPE='OLD' - PATCH 6

PROBLEM:

After an open failure with TYPE='OLD' a retry to open the same file with TYPE='NEW' fails.

SOLUTION:

1. Type in the following MACRO file and name it PATØ6.MAC

```
        .TITLE  OPNSTM
        .IDENT  /12/
        .PSECT  OTS$I
S:
.=S+476
        JSR     PC,PAT
        .PSECT  PAT
PAT:
        MOV     #2,R1
        BIC     #4ØØ,@R4
        RTS     PC
        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØ6=PATØ6.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT.SAV
*OTSCOM=OTSCOM,PATØ6.OBJ
```

All object files are included in the FORTRAN IV V2.1 distribution kit under the account [1,2]. Make sure to always apply the patches to a copy of the distribution kit.

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patch by compiling, linking, and running the following program:

```
        OPEN(UNIT=1,TYPE='OLD',ERR=1)
        STOP'FILE FTN1.DAT EXISTS'
1       OPEN(UNIT=1,TYPE='NEW',ERR=2)
        STOP'FILE OPENED OK'
2       STOP'FILE OPEN FAILED'

        END
```

which should produce the following output if file FTN1.DAT does not exist:

```
STOP -- FILE OPENED OK
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.4 M

1 of 2

FORTRAN LIBRARY FUNCTION ERRTST - PATCH 7

PROBLEM:

The FORTRAN Library Function ERRTST fails to execute properly.

SOLUTION:

1. Type in the following MACRO file and name it PATØ7.MAC

```
        .TITLE  $ERRTST
        .IDENT  /Ø3/
        .PSECT  OTS$I
S=.
.=S+24
        JSR     PC,PAT
.=S+64
        BIC     R2,226(RØ)
        .PSECT  PAT
PAT:
        MOV     RØ,R1
        BIC     #^C<17>,R1
        RTS     PC
        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØ7=PATØ7.MAC
*^Z
```

NOTE: Make a copy of OTSCOM before you patch it just in case something goes wrong.

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT.SAV
*OTSCOM=OTSCOM,PATØ7.OBJ
```

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide.

5. Test the patch by compiling, linking, and running the following program:

```
        OPEN(UNIT=1,TYPE='OLD',ERR=1)
        STOP 'FILE FTN1.DAT EXISTS'
1       CALL ERRTST(28,I)
        TYPE *,I
        STOP 'ERROR IN OPEN'
        END
```

which will produce the following output if file FTN1.DAT does not exist:

```
                1
STOP -- ERROR IN OPEN
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.5 M
1 of 2

FORTRAN CARRIAGE CONTROL OPTION - PATCH 9

PROBLEM:

The FORTRAN carriage control option in the OPEN statement fails to execute properly.

SOLUTION:

1. Type in the following MACRO files, naming them PATØ9A.MAC and PATØ9B.MAC.

PATØ9A.MAC:

```
        .TITLE  $OPEN
        .IDENT  /Ø3/
        .PSECT  OTS$O
S:
.=S+466
        BNE     A
.=S+474
A:
        .END
```

PATØ9B.MAC:

```
        .TITLE  $PUTREC
        .IDENT  /Ø3/
        .PSECT  OTS$I
S:
.=S+46
        BNE     A
.=S+124
A:
        .END
```

2. Assemble the patch files using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØ9A=PATØ9A.MAC
*PATØ9B=PATØ9B.MAC
*^Z
```

3. Install the patches, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT.SAV
*OTSCOM=OTSCOM,PATØ9A.OBJ
.R PAT.SAV
*OTSCOM=OTSCOM,PATØ9B.OBJ
```

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking, and running the following program:

```
        OPEN(UNIT=1,NAME=,'TT:',TYPE='NEW',CARRIAGECONTROL='LIST')
        WRITE(1,1ØØ)
1ØØ     FORMAT('ØTHIS LINE OUTPUT WITH CC="LIST"')
        CLOSE(UNIT=1)
        OPEN(UNIT=1,NAME=,'TT:',TYPE='NEW',CARRIAGECONTROL='FORTRAN')
        WRITE(1,2ØØ)
2ØØ     FORMAT('ØTHIS LINE OUTPUT WITH CC="FORTRAN"')
        CLOSE(UNIT=1)
        OPEN(UNIT=1,NAME=,'TT:',TYPE='NEW')
        WRITE(1,3ØØ)
3ØØ     FORMAT('ØTHIS LINE OUTPUT WITH NO CC SPECIFIED')
        CLOSE(UNIT=1)
        END
```

which should produce the following output:

```
ØTHIS LINE OUTPUT WITH CC="LIST"

THIS LINE OUTPUT WITH CC="FORTRAN"

THIS LINE OUTPUT WITH NO CC SPECIFIED
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.6 M

1 of 2

ENDFILE STATEMENT - PATCH 1Ø

PROBLEM:

FORTRAN does not correctly detect the end of file written by an ENDFILE statement.

SOLUTION:

1. Type in the following MACRO file and name it PATØ1Ø.MAC

```
        .TITLE  $GETREC
        .IDENT  /ØØ3/
        .GLOBL  $EOF2
        .PSECT
S:
.=S+142
        JSR     PC,PAT

        .PSECT  PAT
PAT:    CMPB    #3,RØ
        BNE     3$
        JMP     $EOF2
3$:     CMPB    #'Z-1ØØ,RØ
        RTS     PC
        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PATØ1Ø=PATØ1Ø.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT.SAV
*OTSCOM=OTSCOM,PATØ1Ø.OBJ
```

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking, and running the following program:

```
          PROGRAM PATØ1Ø
          A=1Ø
          WRITE (1,1ØØ) A
          ENDFILE 1
          REWIND 1
1Ø        READ    (1,1ØØ, END=2ØØ) B
          TYPE 1ØØ, B
          GOTO 1Ø
2ØØ       STOP 'END'
1ØØ       FORMAT (F1Ø.1)
          END
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.8 M

1 of 2

LIST DIRECTED ERRORS ARE NOT PROCESSED CORRECTLY

PROBLEM:

Errors on list directed output are not processed correctly.

SOLUTION:

1. Type in the following MACRO file and name it PAT12.MAC

```
        .TITLE  $LISTI
        .IDENT  /Ø3/
        .PSECT  OTS$I
S=.
.=S+754
        BCC     A
.=S+764
        NOP
        JSR     PC,PAT12A
A:      JSR     PC,PAT12B

       ..PSECT  PAT
PAT12A:
        CMP     @R5,#1Ø
        BNE     1$
        MOV     @SP,6(SP)
        CMP     (SP)+,(SP)+
        TST     (SP)+
1$:     CLR     @R5
        RTS     PC

PAT12B:
        MOV     (R5)+,R1
        MOV     2(SP),(R5)+
        MOV     @SP,2(SP)
        TST     (SP)+
        CMP     R1,#1Ø
        RTS     PC
        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PAT12=PAT12.MAC
*^Z
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.8 M

2 of 2

3. Install the patch, using PAT, to the most recently patched OTSCOM.OBJ file:

```
.R PAT.SAV
*OTSCOM=OTSCOM,PAT12.OBJ
```

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking, and running the following program:

```
        BYTE ERRCNT
        DATA ERRCNT/Ø/
        CALL SETERR(5,ERRCNT)
        DO 1Ø I=1,2
        WRITE(7,2Ø)
2Ø      FORMAT('$ENTER A REAL NUMBER: ')
        READ(5,*) X
        WRITE(7,*) 'YOUR NUMBER WAS',X
1Ø      CONTINUE
        STOP
        END
```

The program will prompt you twice for input.

Enter 1.2 and hit return in response to the first prompt. Enter 2.3. and hit return in response to the second prompt.

The following output should be produced:

```
        ENTER A REAL NUMBER:     1.2
        YOUR NUMBER WAS          1.2ØØØØØ
        ENTER A REAL NUMBER:     2.3.
    ?   ERR 5 INPUT CONVERSION ERROR
        IN ROUTINE ".MAIN." LINE 7
        YOUR NUMBER WAS          1.2ØØØØØ
        STOP--
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.9 M

1 of 1

CARRIAGE RETURN IS NOT OUTPUT FOR RECORDS OF CERTAIN LENGTH

PROBLEM:

A carriage return is not output for a formatted record if the length of the record is greater than or equal to the length of the line buffer ($LRECL).

SOLUTION:

1. Type in the following MACRO file and name it PAT13.MAC

```
        .TITLE  $FIO
        .IDEN   /Ø4/
        .PSECT  OTS$I
.=.+1Ø4
        JSR     PC,PAT13
        NOP
        NOP

        .PSECT  PAT
PAT13:
        MOVB    #15,@34(R3)
        INC     34(R3)
        RTS     PC
        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PAT13=PAT13.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched OTSCOM.OBJ file:

```
.R PAT.SAV
*OTSCOM=OTSCOM,PAT13.OBJ
```

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking, and running the following program:

```
        OPEN(UNIT=5,FORM='FORMATTED')
        WRITE(5,1ØØØ)
        WRITE(5,1ØØØ)
1ØØØ    FORMAT(1X,3('1234567891Ø'))
        END
```

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.1Ø M

1 of 2

THE CARRIAGE CONTROL OPTION ON CALL OPEN DOES NOT WORK PROPERLY

PROBLEM:

The carriage control option in CALL OPEN does not work as expected if article Seq 41.3.5 M ("FORTRAN carriage control option - Patch 9") has been applied.

SOLUTION:

NOTE

This patch should only be applied if article Seq 41.3.5 M was previously applied.

1. Type in the following MACRO file and name it PAT15.MAC

```
        .TITLE  $ROPEN
        .IDENT  /Ø4/
        .PSECT  OTS$I
S:
.=S+176
        BIS     #1Ø,@RØ
.=S+21Ø
        BIS     #2Ø,@RØ
.=S+34Ø
        BIS     #2Ø,@RØ
.=S+352
        BIS     #1Ø,@RØ

        .END
```

2. Assemble the patch file using MACRO-11.

```
SW RT11
.SI 28
.R MACRO.SAV
*PAT15=PAT15.MAC
*^Z
```

3. Install the patch, using PAT, to the most recently patched OTSCOM.OBJ file:

```
.R PAT.SAV
*OTSCOM=OTSCOM,PAT15.OBJ
*^Z
```

4. Rebuild the OTS using the procedure described in the FORTRAN IV Installation Guide. Use the recently patched module in the account where the installation will be done.

FORTRAN IV V2.1
for RSTS/E V7.Ø
OTS

Seq 41.3.1Ø M
2 of 2

5. Test the patch by compiling, linking, and running the following program:

```
          CALL OPEN(1,'TT:',Ø,'NEW','NC')
          WRITE(1,1ØØ)
    1ØØ   FORMAT('ØTHIS LINE OUTPUT WITH CC="NC"')
          CALL CLOSE(1)
          CALL OPEN(1,'TT:',Ø,'NEW','CC')
          WRITE(1,2ØØ)
    2ØØ   FORMAT('ØTHIS LINE OUTPUT WITH CC="CC"')
          CALL CLOSE(1)
          CALL OPEN(1,'TT:',Ø,'NEW')
          WRITE(1,3ØØ)
    3ØØ   FORMAT('ØTHIS LINE OUTPUT WITH "CC" NO SPECIFIED')
          CALL CLOSE(1)
          END
```

DATATRIEVE-11 V1.1
for RSTS/E V7
DTR

Seq 42.2.1 R

1 of 1

MINUS DOES NOT WORK (SPR 11-21392 JS)

A minus sign does not work when used in conjunction with a floating dollar sign.

This is a restriction in Version 1.1. It will be researched for a future version.

DATATRIEVE-11 V1.1
for RSTS/E V7
DTR

Seq 42.2.2 M

1 of 2

SORT MALFUNCTION FOR COMP-1, COMP-2, AND COMP-6 FIELDS

PROBLEM:

The Datatrieve-11 Version 1.1 internal sort malfunctions when attempting to sort a domain or collection based on COMP-1 (single precision floating), COMP-2 (double precision floating), or COMP-6 (COBOL V3 binary) datatypes. No error message is given; the resulting sort order, however, is incorrect.

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ01.MAC

```
        .TITLE  ST      DTRQ01 -- CORRECTION FILE FOR MODULE ST
        .PSECT  ST
        .IDENT  /V01.11/
ST=.
.=ST+1324
        JSR     PC,STPAT
.=ST+652
        CMP     FDDTYP(R3),#DTCBIN
        .PSECT  PATCH
STPAT:  MOV     2(R0),R2
        ASR     R3
        BIS     #100000,(R4)
10$:    MOV     (R4)+,(R2)+
        SOB     R3,10$
        RTS     PC
        .END
```

3. Extract the original module from DTRLIB.

DATATRIEVE-11 V1.1
for RSTS/E V7
DTR


```
RUN $LBR
ST.OLD=[1,1]DTRLIB/EX:ST
```

4. Assemble the correction file.

```
RUN $MAC
DTRQ01=DTRQ01
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
ST=ST.OLD,DTRQ01/CS:16526
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=ST
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS.TKB
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
$DTR.TSK=DTR.TSK
```

DATATRIEVE-11 V1.1
for RSTS/E V7
DTR

PROTECTION NOT CHECKED FOR PROCEDURE INVOCATION (SPR 21534)

PROBLEM:

Datatrieve V1.1 does not verify that a user has legitimate access to a dictionary procedure at invocation time. Thus a user can invoke, but not see, a dictionary procedure to which he has no legitimate access.

This patch causes Datatrieve to validate access to a procedure when it is invoked. IT DOES NOT, HOWEVER, ALLOW A PASSWORD TO BE GIVEN AT THE TIME A PROCEDURE IS INVOKED. The privilege to allow invocation of a procedure must be based on UIC alone. An attempt to supply a password in conjunction with a procedure invocation will result in a syntax error.

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ02.MAC

```
        .TITLE  LX      PATCH TO MODULE LX
        .IDENT  /V01.11/
        .PSECT  LX
LX=.
.=LX+2214
        CALL    PAT1
        BCS     LX+2310
        .PSECT  PAT
PAT1:   CALL    DIOBTN
         BCS    10$
        CALL    PRGPW
         BCS    10$
        CALL    PRCOMP
         BCS    10$
        CALL    PRANY
10$:    RTS     PC
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR
LX.OLD=[1,1]DTRLIB/EX:LX
```

4. Assemble the correction file.

```
RUN $MAC
DTRQ02=DTRQ02
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
LX=LX.OLD,DTRQ02/CS:23077
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=LX
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS.TKB
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
$DTR.TSK=DTR.TSK
```

DATATRIEVE-11 V1.1
for RSTS/E V7
DTR

Seq 42.2.4 M

GUIDE MODE ABORTS WITH SEVERE ERROR

PROBLEM:

Datatrieve V1.1 aborts with a severe error or stack overflow when in guide mode when accessing a record with a "large" number of fields. Exactly what is "large" depends on the specific operating system and installation parameters. The problem can be cured by either increasing the STACK parameter in the Datatrieve task build command file or (preferably) by installing this patch.

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ03.MAC

```
        .TITLE  DD      DTRQ03 -- CORRECTION FOR MODULE DD
        .PSECT  DD
        .IDENT  /V01.11/
DD=.
.=DD+2110
        BR      DD+1772
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR
DD.OLD=[1,1]DTRLIB/EX:DD
```

4. Assemble the correction file.

DATATRIEVE-11 V1.1
for RSTS/E V7
DTR


```
RUN $MAC
DTRQ03=DTRQ03
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
DD=DD.OLD,DTRQ03/CS:4754
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=DD
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS.TKB
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
$DTR.TSK=DTR.TSK
```

DATATRIEVE-11 V1.1
for RSTS/E V7
DTR

Seq 42.2.5 M

1 of 1

ERROR IN THE DTR CODE (SPR 11-21831 JS)

STATEMENT

DATATRIEVE-11 will delete the last protection element of a dictionary item if requested.

RESPONSE

There is an error in the DTR code which checks for deletion of last protection element. To repair your dictionary, try this:

```
DEFINE RECORD DICT-REC
       Ø1 ITEM
       Ø3 NAME PIC X(3Ø).
       Ø3 FILLER PIC X(452).;
DEFINE DOMAIN DICT USING DICT-REC
       ON [1,2] QUERY.DIC;
READY DICT SHARED WRITE
ERASE ALL OF DICT WITH NAME=
       "BAD-ELEMENT"
```

DATATRIEVE-11 V1.1
for RSTS/E V6C

DATATRIEVE BUG WITH BINARY ARITHMETIC OPERATIONS (JS)

PROBLEM:

For binary arithmetic operations (+, -, *, /) that have arguments each of a different datatype, a condition will sometimes occur which will produce the correct result when the arguments are on a particular side of the operator, but not when reversed. The latter case will produce no result, but simply the error message "Execution failed." Thus for a floating-point field named "FLOAT", the statement "PRINT 100.0 * FLOAT" will fail but "PRINT FLOAT * 100.0" will give the correct result.

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ09.MAC

```
        .TITLE  AR      CHECKSUM 7052
        .IDENT  /V1.11/
        .PSECT  AR
AR=.
.=AR+330
        JSR     PC,PAT
        .PSECT  PATCH
PAT:    BLE     PAT1
        MOV     R3,R5
PAT1:   CLC
        RTS     PC
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR
AR.OLD=[1,1]DTRLIB/EX:AR
```

4. Assemble the correction file.

```
RUN $MAC
DTRQ09=DTRQ09
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
AR=AR.OLD,DTRQ09/CS:7052
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=AR
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS.TKB
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
$DTR.TSK=DTR.TSK
```

DATATRIEVE-11 V1.1
for RSTS/E V6C

Seq 42.2.7 M

PRINT ALL "QUOTED STRING" DOESN'T WORK CORRECTLY

PROBLEM:

PRINT ALL followed by a quoted string fails with an misleading error message.

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ11.MAC

```
        .TITLE  LX      PATCH TO MODULE LX (SPR #25120)
        .IDENT  /V01.12/
        .PSECT  LX
LX=.
.=LX+322
        CALL    PATCH
        .PSECT  PATCH2
PATCH:  CLR     R2
        CALL    LX+2324
        RTS     PC
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR
LX.OLD=[1,1]DTRLIB/EX:LX
```

4. Assemble the correction file.

```
RUN $MAC
DTRQ11=DTRQ11
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
LX=LX.OLD,DTRQ11/CS:11745
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=LX
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS.TKB
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
$DTR.TSK=DTR.TSK
```

DATATRIEVE-11 V1.1
for RSTS/E V7

MYSTERIOUS "EXECUTION FAILED" MESSAGE WITHOUT EXPLANATION

PROBLEM:

Certain combinations of data types, when used in an arithmetic computation, can cause Datatrieve to abort a request with no messages other than "Execution Failed."

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ08.MAC

```
        .TITLE  AR
        .PSECT  AR
AR=.
.=AR+30
        NOP
.=AR+1172
        NOP
.=AR+1754
        NOP
.=AR+3122
        NOP
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR
AR.OLD=[1,1]DTRLIB/EX:AR
```

DATATRIEVE-11 V1.1
for RSTS/E V7

4. Assemble the correction file.

```
RUN $MAC
DTRQ08=DTRQ08
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
AR=AR.OLD,DTRQ08/CS:5174
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=AR
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS.TKB
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
$DTR.TSK=DTR.TSK
```

DATATRIEVE-11 V1.1
for RSTS/E VØ7

MYSTERIOUS "EXECUTION FAILED" MESSAGE WITHOUT EXPLANATION

PROBLEM:

The original problem states that certain combinations of data types, when used in an arithmetic computation, can cause Datatrieve to abort a request with no messages other than "Execution Failed". The previously issued patch will not work as given, therefore this updated one should be used in place of the rescinded one. (NOTE: This article was originally published in the RSTS/E September 1979 REVIEW).

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ38.MAC

```
        .TITLE  AR
        .IDENT  /V1.13/
        .PSECT  AR
AR=.
.=AR+30
        NOP
.=AR+1172
        NOP
.=AR+1754
        NOP
.=AR+3122
        NOP
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR
```

```
AR,OLD=[1,1]DTRLIB/EX:AR
```

4. Assemble the correction file.

```
RUN $MAC
DTRØ28=DTRØ28
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
AR=AR,OLD,DTRØ28/CS:6463
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=AR
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS,TKB
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP,SAV
SDTR,TSK=DTR,TSK
```

DATATRIEVE-11 V1.1
for RSTS/E V7

Seq 42.2.9 M

EXTRANEOUS (PF)PFEXEQ ERROR MESSAGE IS GENERATED

PROBLEM:

An extraneous error message is generated when a reference is made to a field name qualified by a collection name is used in a report specification. The message issued is:

(PF)PFEXEQ: EXPECTED IS, FD, OR CN BLOCK

The report, in this case, is generated properly.

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ04.MAC

```
        .TITLE  PF
        .IDENT  /V01.11/
        .PSECT  PF
PF=.
.=PF+1432
        TST     #0
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR
PF.OLD=[1,1]DTRLIB/EX:PF
```

4. Assemble the correction file.

```
RUN $MAC
DTRQ04=DTRQ04
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PF=PF.OLD,DTRQ04/CS:5473
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=PF
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS.TKB
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
$DTR.TSK=DTR.TSK
```

DATATRIEVE-11 V1.1
for RSTS/E V7

Seq 42.2.1Ø M

SPACE EXHAUSTED DURING EXECUTION OF CERTAIN REQUESTS

PROBLEM:

When Datatrieve performs a data conversion from a value with a non-zero scale factor to an ascii string it fails to return an internal block to the central storage pools. This results, sooner or later, in an exhausted central storage pool.

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ07.MAC

```
        .TITLE  CN
        .IDENT  /V01.13/
        .PSECT  CN
CN=.
.=CN+404
        CALL    PAT3
.=CN+462
        CALL    PAT4
.=CN+510
        CALL    PAT5
        NOP
        .PSECT  PATCH1
PAT3:   MOV     2(R0),R5
        MOV     R0,R2
        RTS     PC
PAT4:   MOVB    (R5)+,(R3)+
        SOB     R1,PAT4
        BR      PAT6
PAT5:   MOVB    #'0,(R3)+
        SOB     R1,PAT5
PAT6:   MOV     R0,R1
```

```
        MOV     R2,R0
        CALL    ALRTN
        MOV     R1,R0
        RTS     PC
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR
CN.OLD=[1,1]DTRLIB/EX:CN
```

4. Assemble the correction file.

```
RUN $MAC
DTRQ07=DTRQ07
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
CN=CN.OLD,DTRQ07/CS:16166
```

6. Re-insert module into library.

```
RUN $LBR
[1,1]DTRLIB/RP=CN
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB
@DTRSTS.TKB·
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
$DTR.TSK=DTR.TSK
```

DATATRIEVE-11 V1.1
for RSTS/E VØ6C & V7.Ø

SEVERE ERROR WHEN MEMORY EXHAUSTED DURING FIND

PROBLEM:

During a FIND in Datatrieve, if memory becomes exhausted, a severe error is generated and Datatrieve is exited.

SOLUTION:

Install the patch by the following procedure.

PROCEDURE:

1. Login into the account from which Datatrieve-11 was originally installed. The files DTRSTS.TKB, DTRSTS.ODL, and RMSRST.ODL should remain from Datatrieve-11 installation in that account.

2. Build the following correction file: DTRQ14.MAC

```
        .TITLE  RS      PATCH TO MODULE RS (SPR# 26443)
        .IDENT  /V01.11/
        .PSECT  RS
RS=.
.=RS+446
        JMP     PAT1
        .PSECT  PATCH1
PAT1:   MOV     10(R1),R0
         BEQ    10$
        JMP     RS+452
10$:    JMP     RS+472
        .END
```

3. Extract the original module from DTRLIB.

```
RUN $LBR.TSK
LBR>RS.OLD=[1,1]DTRLIB/EX:RS
LBR>^Z
```

4. Assemble the correction file.

```
RUN $MAC.TSK
MAC>DTRQ14=DTRQ14
MAC>^Z
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT.TSK
PAT>RS=RS.OLD,DTRQ14/CS:010276
PAT>^Z
```

6. Re-insert module into library.

```
RUN $LBR.TSK
LBR>[1,1]DTRLIB/RP=RS
LBR>^Z
```

7. Re-TASK-BUILD Datatrieve-11.

```
RUN $TKB.TSK
TKB>@DTRSTS.TKB
TKB>^Z
```

8. Copy the new Datatrieve-11 task image to the system account.

```
RUN $PIP.SAV
*$DTR.TSK=DTR.TSK
*^Z
```

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.1 M

1 of 2

CORRECTION TO RESTORE CORRECT FUNCTION TO /-BOU SWITCH

PROBLEM:

Application of the /-BOU switch causes programs to work incorrectly where indexing is involved.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PDSR5.PAT

```
        .TITLE  PDSR
        .PSECT  PDSR,OVR,REL
        .IDENT  /1A.132A/
        ;CHECKSUM = 26253

CBLTCD  =ØØ7234
MOVCOD  =Ø14624
CBLP    =BEGIN + Ø23Ø24
MOVSS   =Ø15126
DDDD2   =Ø15Ø62
PATARA  =Ø26Ø2Ø
FL.CON  =ØØØØØØ
C.MOV2  =Ø12ØØ3
C.TEST  =ØØ5723
C.ADD4  =Ø61337
C.ADD5  =Ø62737

BEGIN:

        .= BEGIN + CBLTCD + 6
        JSR     R5,     PATCH1

        .= BEGIN + MOVCOD + 1Ø
        JSR     R5,     PATCH2

        .= BEGIN + MOVCOD + 42
        JSR     R5,     PATCH3

        .= BEGIN + 14654
        .WORD   C.ADD5

        .= BEGIN + PATARA
```

```
PATCH1: ASR     CBLP
        BNE     Ø1$
        MOV     (SP)+,  R5
Ø1$:    RTS     R5

PATCH2: MOV     #C.MOV2,        (R3)+
        MOVB    #FL.CON,        (R4)+
        JSR     R5,             BEGIN + MOVSS
        MOV     #C.TEST,        (R3)+
        MOVB    #FL.CON,        (R4)+
        MOV     #C.ADD4,        (R3)+
        MOVB    #FL.CON,        (R4)+
        JSR     R5,             BEGIN + DDDD2
        RTS     R5

PATCH3: MOVB    #FL.CON,        (R4)+
        JSR     R5,             BEGIN + DDDD2
        RTS     R5

        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>PDSR.OLD=LB:CBLLIB/EX:PDSR
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PDSR5.POB,PDSR5/-SP=PDSR5.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PDSR.OBJ=PDSR.OLD,PDSR5.POB/CS:26253
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=PDSR
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.2 M
1 of 2

SYNCHRONIZATION PROBLEMS

PROBLEM:

This patch corrects a problem in the data allocation algorithm for implicit filler characters.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PHS21.PAT

```
        .TITLE  PHS2
        .PSECT  PHS2,OVR
        .IDENT  /1A.59A/
        XYSYNC = 200
        XXSYNC = 002
BEGIN:  .=.+4364
        .WORD   240,240,240,240,240,240,240,240

        .=BEGIN+4426

TOPACH: JMP     @#BEGIN + 20462
        NOP
        NOP
        .=BEGIN + 20462

PATCH:  CMPB    @#BEGIN + 1450, @#BEGIN + 2174
        BGE     01$
        JMP     @#BEGIN + 4436
01$:    JSR     R5,     @#BEGIN + 10142
        BIT     #XYSYNC,        @#BEGIN + 1434
        BNE     02$
        BIC     #<XXSYNC ! XYSYNC>,@#BEGIN + 1434
02$:    JMP     @#BEGIN+4360
        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>PHS2.OLD=LB:CBLLIB/EX:PHS2
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PHS21.POB,PHS21/-SP=PHS21.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PHS2.OBJ=PHS2.OLD,PHS21.POB/CS:2ØØ23
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=PHS2
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.3 M

1 of 3

INVALID RESULTS FROM COMPUTE

PROBLEM:

The compute verb will occasionally generate incorrect results for complex expressions.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it WLKT.PAT

```
        .TITLE  WLKT
        .IDENT  /1A.68A/
        .PSECT  WLKT,OVR

BEGIN:
        .=BEGIN+1546
        JMP     PATCH1
RETURN:
        .=BEGIN+1636
        INCB    T1
        .WORD   240,240,240,240

        .=BEGIN+1762
        INCB    T2
        .WORD   240,240,240,240

        .=BEGIN+2066
        JSR     R5,PATCH2
        .WORD   240

        .=BEGIN+2272
        INCB    T1
        .WORD   240,240,240,240

        .=BEGIN+2440
        INCB    T2
        .WORD   240,240,240,240

        .=BEGIN+2546
        JSR     R5,PATCH3
        .WORD   240,240,240,240,240

        .=BEGIN+3244
```

```
PATCH1:
        CLRB    T1
        CLRB    T2
        MOVB    @#BEGIN+256,-(SP)
        JMP     RETURN

PATCH2:
        JSR     R5,PATCH4
        BICB    #16Ø,@#BEGIN+264
        RTS     R5

PATCH3:
        JSR     R5,CGBOOL
        BEGIN+344
        BEGIN+346
        BEGIN+562
        BEGIN+1ØØ4
        BEGIN+1ØØ6
        JSR     R5,PATCH4
        RTS     R5

PATCH4:
        TSTB    T1
        BEQ     1$
        MOVB    @#BEGIN+3Ø7,RØ
        BIC     #177ØØØ,RØ
        JSR     R5,FRETMP
        CLRB    T1
1$:     TSTB    T2
        BEQ     2$
        MOVB    @#BEGIN+331,RØ
        BIC     #177ØØØ,RØ
        JSR     R5,FRETMP
        CLRB    T2
2$:     RTS     R5

T1:     .BYTE   Ø
T2:     .BYTE   Ø

        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>WLKT.OLD=LB:CBLLIB/EX:WLKT
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>WLKT.POB,WLKT/-SP=WLKT.PAT
MAC>^Z                  (control/z to exit)
```

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>WLKT.OBJ=WLKT.OLD,WLKT.POB/CS:53404
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=WLKT
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.4 M

1 of 2

INITIALIZATION PROBLEM ON COMP-3 ITEMS

PROBLEM:

Value clauses for data items with a COMP-3 usage initialize that item with an incorrect value.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PHS2.PAT

```
        .TITLE  PHS2
        .IDENT  /1A.59B/
        .PSECT  PHS2,OVR

BEGIN:
        .=BEGIN+16554
        JMP     PATCH
RETURN:

        .=BEGIN+16632
        .WORD   240,240,240,240,240,240,240

        .=BEGIN+20524
PATCH:
        MOV     R2,-(SP)
        MOV     R2,R4
        NEG     R2
        JMP     RETURN

        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>PHS2.OLD=LB:CBLLIB/EX:PHS2
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PHS2.POB,PHS2/-SP=PHS2.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PHS2.OBJ=PHS2.OLD,PHS2.POB/CS:1344Ø
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=PHS2
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.5 M

1 of 2

MANDATORY PATCH FOR EDITED MOVES

PROBLEM:

Occasionally, when a MOVE verb is executed, and the receiving data item is an edited one containing the V and/or P symbol, the move is performed incorrectly.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PICTRN.PAT

```
        .TITLE  PICTRN
        .IDENT  /1A.Ø4A/
        .PSECT  PICTRN

BEGIN:
        .=BEGIN + 1122
        .WORD   BEGIN+446
        .WORD   BEGIN+446
        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>PICTRN.OLD=LB:CBLLIB/EX:PICTRN
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PICTRN.POB,PICTRN/-SP=PICTRN.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PICTRN.OBJ=PICTRN.OLD,PICTRN.POB/CS:7ØØ5
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=PICTRN
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.6 M

1 of 2

MANDATORY PATCH FOR LEADING SEPARATE SIGNS IN CALL STATEMENT

PROBLEM:

Call statement processing passes the wrong address to subroutines when the actual parameters are group items containing subordinates with leading separate signs.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PH5B.PAT

```
        ;+
        ;PH5B COMPILER PATCH
        ;CORRECTS ADDRESS IN LINKAGE SECTION ITEMS
        ;WITH LEADING SEPARATE SIGN.
        ;CHECKSUM IS Ø15374
        ;-
        .TITLE  PH5B
        .IDENT  /1A.54A/
        .ENABLE AMA
        .PSECT  PH5B,OVR

BEGIN:
        .=BEGIN + 2Ø5Ø
        JSR     R5, PATCH
        NOP

        .=BEGIN + 5634
PATCH:  MOV     24(RØ), BEGIN + 3Ø4
        CMPB    #1,     31(RØ)
        BEQ     EXIT
        CMPB    #115,   31(RØ)
        BEQ     EXIT
        BITB    #2Ø,    2Ø(RØ)
        BEQ     EXIT
        BITB    #4Ø,    2Ø(RØ)
        BEQ     EXIT
        INC     BEGIN + 3Ø4
EXIT:   RTS     R5
        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>PH5B.OLD=LB:CBLLIB/EX:PH5B
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PH5B.POB,PH5B/-SP=PH5B.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PH5B.OBJ=PH5B.OLD,PH5B.POB/CS:15374
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=PH5B
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.7 M

1 of 2

MANDATORY PATCH FOR MOVE

PROBLEMS:

1. Whenever a MOVE is attempted from one binary item to another, and the decimal places do not align, data could be moved incorrectly.

2. Whenever a MOVE is attempted from a subscripted data item to another subscripted data item, data could be moved incorrectly.

3. Whenever a MOVE is attempted from a COMP-6 item to another COMP-6 item which is smaller in size, a reserved instruction trap will occur at run time.

4. Whenever a MOVE is attempted from an alphanumeric data item to another and one of the operands is declared in the LINKAGE SECTION and is stored at an odd address, an odd address trap will occur at run time.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PDSR.PAT

```
        .TITLE  PDSR
        .IDENT  /1A.132B/
        .PSECT  PDSR,OVR

BEGIN:
        .=BEGIN+3356
        JSR     R5,PATCH

        .=BEGIN+3440
        JSR     R5,PATCH

        .=BEGIN+3574
        .WORD   240,240,240,240
        JSR     R5,BEGIN+3026

        .=BEGIN+4312
        JSR     R5,PATCH2

        .=BEGIN+26150
```

```
PATCH:
        MOVB    37(R2),RØ
        CMPB    RØ,37(R3)
        BGT     Ø1$
        MOVB    37(R3),RØ
Ø1$:
        RTS     R5

PATCH2:
        BITB    #2Ø,25(R2)
        BNE     Ø1$
        BITB    #2Ø,25(R3)
        BNE     Ø1$
        MOV     3Ø(R2),RØ
        RTS     R5
Ø1$:    MOV     #BEGIN+4342,R5
        RTS     R5
        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>PDSR.OLD=LB:CBLLIB/EX:PDSR
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PDSR.POB,PDSR/-SP=PDSR.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PDSR.OBJ=PDSR.OLD,PDSR.POB/CS:23432
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=PDSR
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.8 M

1 of 2

COMPUTE B = A(I) FAILS TO EVALUATE SUBSCRIPTS CORRECTLY

PROBLEM:

When the arithmetic expression in a COMPUTE statement consists of a single subscripted data-name, the compiler fails to generate code to evaluate the subscript(s).

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it COMP.PAT

```
        ;PATCH FOR SPR 11-23486
        ;CHECKSUM IS Ø07717
        .TITLE  COMP
        .IDENT  /1A.28A/
        .ENABLE AMA

BEGIN:

        .=BEGIN + 1Ø42

        JSR     R5,     PATCH
        NOP

        .=BEGIN + 362Ø

PATCH:  JSR     R5, DNXP2
        1$
1$:     CMPB    34(RØ), #1
        RTS     R5

        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>COMP.OLD=LB:CBLLIB/EX:COMP
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>COMP.POB,COMP/-SP=COMP.PAT
MAC>^Z                    (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>COMP.OBJ=COMP.OLD,COMP.POB/CS:7717
PAT>^Z                    (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=COMP
LBR>^Z                    (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.9 M

1 of 3

MANDATORY PATCH FOR ARITHMETICS

PROBLEM:

1. When an ADD statement is encountered with multiple destinations, and the source is binary and subscripted, the program will abort on the run.

2. When an internal temporary is created in an arithmetic expression, it will always be unsigned, thereby occasionally creating incorrect results.

3. When an internal temporary is created in an arithmetic expression, it will occasionally not be as large as needed, thereby truncating results.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it ARCOGØ.PAT

```
        .TITLE  ARCOG
        .IDENT  /1A.22A/
        .PSECT  ARCOG,OVR
        .ENABLE AMA

BEGIN:
        .=BEGIN + 2ØØ6
        JSR     R5,PATCH2
        NOP

        .=BEGIN+523Ø
        .WORD   21

        .=BEGIN+7322
        JSR     R5,PATCH
        BEGIN+737Ø
        NOP

        .=BEGIN+1Ø56Ø
        MOVB    ASMD,-(SP)
        CLRB    ASMD
        JSR     PC,@#BEGIN + 1734
        MOV     USAGCD,R1
        MOV     #TMPTBL,R2
        JSR     R5,@#BEGIN+5152
        BR      1$

        .=BEGIN + 1Ø632
```

```
1$:

        .=BEGIN+13542
PATCH:
        CMP     62(RØ),#1
        BGT     1$
        CMP     62(R1),#1
        BGT     1$
        CMP     32(RØ),32(R1)
        BNE     1$
        TST     (R5)+
        RTS     R5
1$:     MOV     (R5),R5
        RTS     R5

PATCH2:
        TSTB    ASMD
        BNE     1$
        INC     MAXINT
1$:     MOVB    OPR1DP,MAXDEC
        RTS     R5

        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>ARCOG.OLD=LB:CBLLIB/EX:ARCOG
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>ARCOGØ.POB,ARCOGØ/-SP=ARCOGØ.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>ARCOG.OBJ=ARCOG.OLD,ARCOGØ.POB/CS:34572
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=ARCOG
LBR>^Z                  (control/z to exit)
```

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.9 M

3 of 3

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.1Ø M

1 of 2

MANDATORY PATCH FOR SET WITH PACKED DESTINATION

PROBLEM:

Whenever a SET verb is used with a packed destination, the task builder aborts with an undefined symbol.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it VPSET.PAT

```
        .TITLE  VPSET
        .IDENT /1A.Ø7A/

BEGIN:
        .=BEGIN+131Ø
         WORD   3Ø2

        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>VPSET.OLD=LB:CBLLIB/EX:VPSET
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>VPSET.POB,VPSET/-SP=VPSET.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>VPSET.OBJ=VPSET.OLD,VPSET.POB/CS:454Ø
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=VPSET
LBR>^Z                    (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.11 M

1 of 3

MANDATORY COMPILER PATCH - SYNCHRONIZATION

PROBLEM:

Synchronization between nested occurs clauses is sometimes improperly handled.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it PHS2.PAT

```
        .TITLE  PHS2
        .PSECT  PHS2,OVR
        .IDENT  /1A.59C/
        .ENABLE AMA

        ;+
        ;CHECKSUM IS 26152
        ;-

        XXSYNC = ØØ2
        XYSYNC = 2ØØ
        XZSYNC = 4ØØ
        OCCF   = Ø1Ø
        SOCCF  = 2ØØ

BEGIN:
        .=BEGIN + 4426
        JMP     PATCH1
RTN1:

        .=BEGIN + 1Ø564
        .WORD   ØØØ4Ø2

        .=BEGIN + 13276
        .WORD   ØØØ6Ø6

        .=BEGIN + 14164
        JSR     R5, PATCH2

        .=BEGIN + 2Ø536
```

```
PATCH1:
        CMPB    BEGIN + 1450, BEGIN + 2174
        BGE     Ø1$
        JMP     RTN1
Ø1$:    BIT     #XZSYNC, BEGIN + 1434
        BEQ     Ø2$
        BIT     #XXSYNC, BEGIN + 1434
        BNE     Ø2$
        BIT     #OCCF,   BEGIN + 1432
        BEQ     Ø2$
        BIS     #XXSYNC, BEGIN + 1434
Ø2$:    JSR     R5, BEGIN + 10142
        BIT     #XYSYNC, BEGIN + 1434
        BNE     Ø3$
        BIC     #<XYSYNC!XXSYNC>,BEGIN + 1434
        BIT     #SOCCF,  BEGIN + 1432
        BNE     Ø3$
        BIC     #XZSYNC, BEGIN + 1434
Ø3$:    JMP     BEGIN + 4402

PATCH2: MOV     R4,      BEGIN + 1436
        BIT     #XZSYNC, R1
        BEQ     Ø1$
        BIS     #XZSYNC, BEGIN + 1434
Ø1$:    RTS     R5

        .END
```

3. Extract the original module from CBLLIB.OLB.

```
RUN $LBR
LBR>PHS2.OLD=LB:CBLLIB/EX:PHS2
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>PHS2.POB,PHS2/-SP=PHS2.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>PHS2.OBJ=PHS2.OLD,PHS2.POB/CS:26152
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:CBLLIB/RP=PHS2
LBR>^Z                  (control/z to exit)
```

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Compiler

Seq 43.2.11 M

3 of 3

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.Ø.

COBOL-11 V4
for RSTS/E V7
COMPILER PATCH

Seq 43.2.12 M

1 of 2

BINARY AID PATCH

PROBLEM:

When an ADD is attempted with two binary data items with the same scale and word size, and at least one is either four or nine digits, the ADD will be done incorrectly.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it ARCOG.PAT

```
        .TITLE  ARCOG
        .IDENT  /1A.22E/
        .PSECT  ARCOG,OVR
        .ENABL  AMA

BEGIN:
        .=BEGIN+3734
        JMP PATCH

        .=BEGIN+13624
PATCH:
        TSTB    ASMD
        BNE     5$
        BITB    #1,OPR3FL
        BNE     5$
        DEC     BEGIN
5$:     MOV     BEGIN,BEGIN+6
        BITB    #2,ASMD
        BEQ     10$
        CMPB    OPR1PL,BEGIN+6
        BLE     1$
        MOVB    OPR1PL,BEGIN+6
1$:     CMPB    OPR2PL,BEGIN+6
        BLE     10$
        MOVB    OPR2PL,BEGIN+6
```

```
10$:    MOV     #BEGIN+20,R0
        CMP     #12,BEGIN+6
        BGE     11$
        MOV     #12,BEGIN+6
11$:    ADD     BEGIN+6,R0
        MOVB    (R0),R1
        ADD     R1,BEGIN+16
        RTS     R5
        .END
```

3. Extract the original module from CBLLIB.OLB

```
RUN $LBR
LBR>ARCOG.OLD=CBLLIB/EX:ARCOG
LBR>^Z                      (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>ARCOG.POB,ARCOG/-SP=ARCOG.PAT
MAC>^Z                      (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>ARCOG.OBJ=ARCOG.OLD,ARCOG.POB/CS:33247
PAT>^Z                      (control/z to exit)
```

6. Re-insert the module into library.

```
RUN $LBR
LBR>CBLLIB/RP=ARCOG
LBR>^Z                      (control/z to exit)
```

7. Re-TASK-BUILD the compiler with the new object library using the command file CBLBLD.CMD. If the command file is not located on your system, it may be obtained from the original release kit for COBOL 4.0.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.1 M
1 of 2

MANDATORY PATCH FOR COBOL INTERACTIVE DEBUGGER

PROBLEM:

The COBOL debugger generates and deposits random values when the DEPOSIT command is used with numeric data.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it GENB4.PAT

```
        .TITLE  GENB4
        .PSECT  $GENB4, RO,I,GBL,REL,OVR
        .IDENT  /1A.Ø7/

.=.+116
        MOV     #$COBWK+16, R4
        .END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>GENB4.OLD=LB:COBLIB/EX:GENB4
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>GENB4.POB,GENB4/-SP=GENB4.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>GENB4.OBJ=GENB4.OLD,GENB4.POB/CS:1Ø533
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=GENB4
LBR>LB:COBOVR/RP=GENB4
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.2 M

1 of 2

MANDATORY PATCH FOR DIVIDE AND COMPUTE

PROBLEM:

The divide routine used by the DIVIDE and COMPUTE verbs occasionally gives the wrong answer.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it DIV.PAT

```
        .TITLE  DIV
        .PSECT  $DIV,RO,OVR
        .IDENT  /1A.Ø3A/
$START=.
.=$START+1514
        BHI     $START + 1534
.END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>DIV.OLD=LB:COBLIB/EX:DIV
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>DIV.POB,DIV/-SP=DIV.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>DIV.OBJ=DIV.OLD,DIV.POB/CS:6ØØ4
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=DIV
LBR>LB:COBOVR/RP=DIV
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.3 M
1 of 2

MANDATORY PATCH FOR BINARY SIZE ERROR

PROBLEM:

When the ON SIZE ERROR phrase is used with certain arithmetic operations, the result may be incorrect.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it BINSER.PAT

```
        .TITLE  BINSER
        .IDENT  /1A.Ø6/
$START=.
.=$START + 52

        JSR     PC, $PATCH

.PSECT  PATCH
$PATCH:
        MOVB    5(R3),RØ
        CLC
        RTS     PC
        .END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>BINSER.OLD=LB:COBLIB/EX:BINSER
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>BINSER.POB,BINSER/-SP=BINSER.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>BINSER.OBJ=BINSER.OLD,BINSER.POB/CS:66Ø7
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=BINSER
LBR>LB:COBOVR/RP=BINSER
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.4 M
1 of 2

MANDATORY PATCH FOR UNSTRING

PROBLEM:

The UNSTRING WITH POINTER command loses its pointer in large programs.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it STRING.PAT

```
        .TITLE  STRING
        .IDENT  /1A.13/
        .PSECT  $STRNG,RO,I,GBL,REL,OVR
$START=.
.=$START + 56
        BNE     .+5Ø
        .END
```

3. Extract the original module from COBLIB.OLB..

```
RUN $LBR
LBR>STRING.OLD=LB:COBLIB/EX:STRING
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>STRING.POB,STRING/-SP=STRING.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>STRING.OBJ=STRING.OLD,STRING.POB/CS:71ØØ
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=STRING
LBR>LB:COBOVR/RP=STRING
LBR>^Z                  (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.5 F

1 of 2

PERFORMANCE INCREASE - RELATIVE FILES

PROBLEM:

When reading a relative file, some unnecessary overhead is imposed which can affect performance. Applying this patch will provide performance increase when reading relative files.

SOLUTION:

The following patch should be applied if your installation accesses relative files.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it RRERR.PAT

```
        .TITLE  RRERR
        .IDENT  /1A.Ø1A/
        .PSECT  $CRERR,GBL,I,RO,REL,OVR

BEGIN:
        .=BEGIN+2Ø
        .WORD   415
        .END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>RRERR.OLD=LB:COBLIB/EX:RRERR
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>RRERR.POB,RRERR/-SP=RRERR.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>RRERR.OBJ=RRERR.OLD,RRERR.POB/CS:4747
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=RRERR
LBR>LB:COBOVR/RP=RRERR
LBR>^Z                  (control/z to exit)
```

7. To take advantage of these patches, you must re-task build your COBOL program.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.6 F

1 of 2

PERFORMANCE INCREASE - INDEXED FILES

PROBLEM:

When reading an indexed file, some unnecessary overhead is imposed which can affect performance. Applying this patch will provide performance increase when reading indexed files.

SOLUTION:

The following patch should be applied if your installation accesses indexed files.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it IREIR.PAT

```
        .TITLE  IREIR
        .IDENT  /1A.Ø2A/
        .PSECT  $CREIR,GBL,I,RO,REL,OVR

BEGIN:
        .=BEGIN+54
        .WORD   415
        .END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>IREIR.OLD=LB:COBLIB/EX:IREIR
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>IREIR.POB,IREIR/-SP=IREIR.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>IREIR.OBJ=IREIR.OLD,IREIR.POB/CS:5237
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=IREIR
LBR>LB:COBOVR/RP=IREIR
LBR>^Z                  (control/z to exit)
```

7. To take advantage of these patches, you must re-task build your COBOL program.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.7 M
1 of 2

MANDATORY PATCH FOR CLOSE WITH REWIND

PROBLEM:

The WITH REWIND clause of the CLOSE statement works sporadically.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it SCLS.PAT

```
        .TITLE  SCLS
        .IDENT  /1A.Ø1A/
        .PSECT  $CSCL,GBL,I,RO,REL,OVR
BEGIN:
        .=BEGIN+32
        BIS     #2,22(R2)
        .=BEGIN+5Ø
        BIC     #2,22(R2)
        .END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>SCLS.OLD=LB:COBLIB/EX:SCLS
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>SCLS.POB,SCLS/-SP=SCLS.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>SCLS.OBJ=SCLS.OLD,SCLS.POB/CS:7126
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=SCLS
LBR>LB:COBOVR/RP=SCLS
LBR>^Z                  (control/z to exit)
```

7. To take advantage of these patches, you must re-task build your COBOL program.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.8 M
1 of 2

MANDATORY PATCH FOR OPEN WITH NO REWIND

PROBLEM:

When a file is marked open with no rewind, it gets an odd address trap on the open.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it OPSUTL.PAT

```
        .TITLE  OPSUTL
        .IDENT  /1A.Ø3A/
        .PSECT  $OPUTL,GBL,I,RO,REL,OVR

X:
        .=X+342
        JSR     PC,$OPPØ1
        NOP

        .PSECT  OPSPT1
$OPPØ1:
        MOVB    332(R4),42(R3)
        BICB    #374,42(R3)
        RTS     PC
        .END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>OPSUTL.OLD=LB:COBLIB/EX:OPSUTL
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>OPSUTL.POB,OPSUTL/-SP=OPSUTL.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>OPSUTL.OBJ=OPSUTL.OLD,OPSUTL.POB/CS:14412
PAT>^Z                    (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=OPSUTL
LBR>LB:COBOVR/RP=OPSUTL
LBR>^Z                    (control/z to exit)
```

7. To take advantage of these patches, you must re-task build your COBOL program.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.9 M
1 of 2

MANDATORY PATCH FOR ROUNDING ERROR

?ROBLEM:

In some cases, when there can be no rounding (all operands have the same decimal point alignment), five is added to the result gratuitously.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it BINRND.PAT

```
        .TITLE  BINRND
        .IDENT  /1A.Ø3A/
        .PSECT  $BINRN,GBL,I,RO,OVR

.=.+56
        JSR     PC, $BRPØ1

        .PSECT  BRPTØ1
$BRPØ1:
        CLR     R2
        CLR     @2(RØ)
        RTS     PC

        .END
```

3. Extract the original module from COBLIB.OLB..

```
RUN $LBR
LBR>BINRND.OLD=LB:COBLIB/EX:BINRND
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>BINRND.POB,BINRND/-SP=BINRND.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>BINRND.OBJ=BINRND.OLD,BINRND.POB/CS:11424
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=BINRND
LBR>LB:COBOVR/RP=BINRND
LBR>^Z                  (control/z to exit)
```

7. To take advantage of these patches, you must re-task build your COBOL program.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.1Ø M

1 of 2

MANDATORY PATCH FOR SIZE ERROR CONDITIONS

PROBLEM:

1. In some cases, with destinations between 4 and 9 digits long, the size error branch will not be taken for powers of ten.

2. In some cases, with a packed decimal destination and a size error clause, the result will be wrong by an order of ten.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it BINSR2.PAT

```
        .TITLE  BINSER
        .IDENT  /1A.Ø6A/

X=.
.=X+74
        JSR     PC, $BSPØ2
.=X+232
        JSR     PC, $BSPØ2
.=X+31Ø
        BHIS    X+344
.=X+41Ø
        JSR     PC, $BSPØ2

        .PSECT  $BSØØ2,GBL,REL,CON,RO
$BSPØ2:
        MOV     #$COBWK+2, R4
        CLR     (R4)
        MOVB    (R3), (R4)
        RTS     PC

        .END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>BINSER.OLD=LB:COBLIB/EX:BINSER
LBR>^Z                  (control/z to exit)
```

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

4. Assemble the correction file.

```
RUN $MAC
MAC>BINSR2.POB,BINSR2/-SP=BINSR2.PAT
MAC>^Z                    (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>BINSER.OBJ=BINSER.OLD,BINSR2.POB/CS:16663
PAT>^Z                    (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=BINSER
LBR>LB:COBOVR/RP=BINSER
LBR>^Z                    (control/z to exit)
```

7. To take advantage of these patches, you must re-task build your COBOL program.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Object Library - Non-Overlaid

Seq 43.9.11 M

1 of 2

MANDATORY PATCH FOR DECIMAL POINT ALIGNMENT

PROBLEM:

The result of an addition or subtraction may be off by a power of ten, when it is usage COMP, COMP-3, or COMP-6. This problem can occur with ADD, SUBTRACT, or COMPUTE.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it DECGEN.PAT

```
        .TITLE  DECGEN
        .PSECT  $DECGE,GBL,I,RO,REL,OVR
        .IDENT  /1A.22A/
X=.
.=X+23Ø
        MOV     (R3), R4
        NOP
        .END
```

3. Extract the original module from COBLIB.OLB.

```
RUN $LBR
LBR>DECGEN.OLD=LB:COBLIB/EX:DECGEN
LBR>^Z                  (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>DECGEN.POB,DECGEN/-SP=DECGEN.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>DECGEN.OBJ=DECGEN.OLD,DECGEN.POB/CS:71Ø7
PAT>^Z                  (control/z to exit)
```

6. Re-insert the module into the library.

```
RUN $LBR
LBR>LB:COBLIB/RP=DECGEN
LBR>LB:COBOVR/RP=DECGEN
LBR>^Z                  (control/z to exit)
```

7. To take advantage of these patches, you must re-task build your COBOL program.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Interactive Debugger

Seq 43.1Ø.1 M

MANDATORY PATCH FOR CID ABORT

PROBLEM:

COBOL programs that are linked with the COBOL INTERACTIVE DEBUGGER terminate immediately on invokation without any error message.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it CID.PAT

```
        .TITLE  CID
        .PSECT  $COD
        .IDENT  /1A.Ø5/

$START=.
.=$START + 424
        BICB    #1, 272(R4)
.=$START + 446
        MOV     #46, R3
.=$START + 466
        BISB    #1, 272(R4)
.=$START + 6Ø6
        ADD     #2, R4
.=$START + 616
        MOV     #$COBWK + 46, R2
.=$START + 764
        MOV     #$COBWK + 46, R3
.=$START + 111Ø
        MOV     #$COBWK + 46, RØ
.=$START + 1166
        MOV     #$COBWK + 47, R2
.=$START + 33Ø4
        BISB    #1, 272(R4)

        .TITLE  XRUN
         PSECT  $XRUN, I, RO, GBL, REL, OVR
        .IDENT  /1A.1Ø/

$START = .
.=$START + 114
        MOV     #$COBWK + 254, RØ
.=$START + 242
        MOV     #$COBWK + 46, RØ
```

```
.=$START + 25Ø
        ADD     27Ø(R4), R1
.=$START + 1Ø32
        JSR     PC, $P1XRN
.=$START + 1Ø64
        MOV     #$COBWK + 252, R4

.=$START + 1110

$P1XRN:
        JSR PC, $START + 76
        MOV     R4, -(SP)
        MOV     #$COBWK + 42Ø, R4
        TST     4(R4)
         BNE    1$
        MOV     (SP)+, R4
        RTS     PC

1$:     MOV     R3, -(SP)
        MOV     (R4)+, -(SP)
        MOV     (R4)+, -(SP)
        MOV     (R4)+, -(SP)
        MOV     (R4)+, R3
        MOV     #$COBWK, -(SP)
        ADD     #252, (SP)
        MOV     #Ø, @(SP)+
        .GLOBL  $IOUTL
        JSR     PC, $IOUTL
        .WORD   2Ø
        .WORD   .+2
        MOV     (SP)+, R3
        MOV     (SP)+, R4
        RTS     PC
.END
```

3. Copy the object module CID.OBJ into your account.

```
RUN $PIP
*CID.OLD=LB:CID.OBJ
*^Z                     (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>CID.POB,CID/-SP=CID.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>CID.OBJ=CID.OLD,CID.POB/CS:51626
PAT>^Z                  (control/z to exit)
```

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Interactive Debugger

Seq 43.1Ø.1 M
3 of 3

6. Copy the patched version of CID.OBJ back to the library account.

```
RUN $PIP
*LB:CID.OBJ=CID.OBJ
*^Z                    (control/z to exit)
```

7. Re-TASK-BUILD any programs that have this problem using the patched OTS.

COBOL-11 V4.Ø
for RSTS/E V7.Ø
COBOL Interactive Debugger

Seq 43.1Ø.2 M

1 of 2

MANDATORY PATCH TO ALLOW CID TO EXAMINE NON-DISPLAY NUMBERS

PROBLEM:

CID, the COBOL INTERACTIVE DEBUGGER, prints a blank when asked to EXAMINE numbers described as USAGE COMP, USAGE COMP-3, or USAGE COMP-6.

SOLUTION:

Install the mandatory patch by the following procedure.

PROCEDURE:

1. Login in to any privileged account.

2. Build the following correction file and name it CID2.PAT

```
        .TITLE  XRUN
        .PSECT  $COD
        .IDENT  /1A.Ø5A/
BEGIN:
        .=BEGIN+6Ø6
        ADD     #32, R4
        .END
```

3. Copy the object module CID.OBJ into your account.

```
RUN $PIP
*CID.OLD=LB:CID.OBJ
*^Z                     (control/z to exit)
```

4. Assemble the correction file.

```
RUN $MAC
MAC>CID2.POB,CID2/-SP=CID2.PAT
MAC>^Z                  (control/z to exit)
```

5. Run the "PAT" utility to correct the object module.

```
RUN $PAT
PAT>CID.OBJ=CID.OLD,CID2.POB/CS:6474
PAT>^Z                  (control/z to exit)
```

6. Copy the patched version of CID.OBJ back to the library account.

```
RUN $PIP
*LB:CID.OBJ=CID.OBJ
*^Z                    (control/z to exit)
```

7. Re-TASK-BUILD programs which use CID with the new version.

INSTALLING COBOL V4.Ø ON RSTS/E V7.Ø

Prior to the installation of COBOL V4.Ø on RSTS/E V7.Ø, LB: must be assigned to SY:[1,1]. When building COBOL V4.Ø, use the INSCBL.CMD command file on Patch Kit "A" of the RSTS/E V7.Ø distribution kit instead of the one on the COBOL distribution kit.

The RMS-11 distribution contains ODL files that, in the past, were installed from the COBOL kit. If the command file from the COBOL kit is used, it will replace the new ODLs with obsolete ones. The COBOL Merge Utility uses these files to build overlay descriptor references to RMS I/O routines. The RMS-11 V1.8 distribution kit contains the correct ODLs.

The RSTS/E V7.Ø patch kit contains a new copy of CBLMRG.OLB and an object module to be included in COBOVR.OLB. These will automatically be included when the patches to COBOL V4.Ø are applied.

DX/RSTS V3.Ø
for RSTS/E V7.Ø
Package Notes

INSTALLING DX/RSTS V3.Ø ON RSTS/E V7.Ø

1. DX/RSTS V3.Ø will not build if PIP.SAV has been patched to make "/LOG" the default. (See article Seq 22.13.7 F.) This patch must be removed to accomplish the build.

2. DX/RSTS V3.Ø DXLPT program will not run when invoked with the "RUN" command. Modify the CCL file as described on page 5 of the DX/RSTS Installation Guide.

3. When building DX/RSTS V3.Ø from magnetic tape distribution media, do not issue the "MOUNT" command called for in paragraph 2, page 3 of the DX/RSTS Installation Guide. This command applies only when building from disk distribution media.

RSTS/E V7.Ø
User Assigned Components
Package Notes

USER ASSIGNED COMPONENTS

Many users generate patch command and patch files for their own software or generate installation specific patches for Digital supplied software. For those users who wish to maintain these files in a format consistant with the Digital supplied patches, the following Component.subcomponent numbers have been reserved:

9Ø.Ø User Assigned Components - For Development Use
91.Ø - 99.Ø User Assigned Components - For User Use

Component 9Ø will be used by the RSTS/E development group for notes such as this and any information we feel may be of use to the users of this facility. Components 91 through 99 will not be assigned by the development group and will be permanently "Reserved."

9.Ø Software Product Descriptions (SPDs) and Option Bulletins

9.1 Software Product Descriptions (SPDs)

Periodically, new or revised Software Product Description (SPD) bulletins will appear in the RSTS/E Software Dispatch for various software products marketed by DIGITAL. This section of the notebook is provided as a convenient place to file these SPDs for future reference.

Every SPD has a unique number, a sample of which is shown below:

SPD 14.52.Ø

This number appears on the first page of the SPD bulletin, at the far right hand side of the PRODUCT NAME: line.

Note that the last part of the SPD number is the revision level, with Ø being assigned for original issues of SPDs.

9.2 Option Bulletins

Periodically, new or revised Option Bulletins will appear in the RSTS/E Software Dispatch for various products marketed by DIGITAL. This section of the release notes is provided as a convenient place to file these bulletins. There is no filing scheme for option bulletins.